RIGOL

ADM Mode

For RSA6000 Series Spectrum Analyzer

Programming Guide

Nov. 2025

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1 Document Overview

This manual is your guide to programming RSA6000 series spectrum analyzer by using SCPI commands through remote interface. RSA6000 series can communicate with the PC via the USB or LAN (requiring to work with RIGOL USB-GPIB adaptor) interface.

TIP

For the latest version of this manual, download it from the official website of RIGOL (*http://www.rigol.com*).

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Software upgrade might change or add product features. Please acquire the latest version of the manual from RIGOL website or contact RIGOL to upgrade the software.

Format Conventions in this Manual

1. **Key**

   The front panel key is denoted by the menu key icon. For example,

   indicates the "System" key.

2. **Menu**

   The menu item is denoted by the format of "Menu Name (Bold) + Character Shading" in the manual. For example, **Setup** indicates clicking or tapping the "Setup" sub-menu under the "Utility" function menu to view the basic setting configuration items.

3. **Operation Procedures**

   The next step of the operation is denoted by ">" in the manual. For example,
   > **Save** indicates that first clicking or tapping the icon , then clicking or tapping **Save**.

Content Conventions in this Manual

The RSA6000 series spectrum analyzer includes the following models. Unless otherwise specified, this manual takes RSA6265 as an example to illustrate the functions and operation methods of the RSA6000 series.

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Model	Frequency Range
RSA6265	5 kHz to 26.5 GHz
RSA6140	5 kHz to 14 GHz
RSA6085	5 kHz to 8.5 GHz

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2 Programming Overview

This chapter introduces how to set up remote communication between the spectrum analyzer and the PC, the remote control methods, the syntax, symbols, parameters, and abbreviation rules of the SCPI commands.

2.1 SCPI Command Overview

SCPI (Standard Commands for Programmable Instruments) is a standardized instrument programming language that is built upon the existing standard IEEE 488.1 and IEEE 488.2 and conforms to various standards, such as the floating point operation rule in IEEE 754 standard, ISO 646 7-bit coded character set for information interchange (equivalent to ASCII programming). The SCPI commands provide a hierarchical tree structure, and consist of multiple subsystems. Each command subsystem consists of one root keyword and one or more sub-keywords.

Syntax

The command line usually starts with a colon; the keywords are separated by colons, and following the keywords are the parameter settings available. The command ending with a quotation mark indicates querying a certain function and returns the query results. The keywords of the command and the first parameter are separated by a space.

For example,

:ACQuire:TYPE <*type*>

:ACQuire:TYPE?

ACQuire is the root keyword of the command, **TYPE** is the second-level keyword. The command line starts with a colon "**:**", and different levels of keywords are also separated by colons. <*type*> indicates a settable parameter. The command ending with a quotation mark "**?**" indicates querying a certain function. The command keywords **:ACQuire:TYPE** and the parameter <*type*> are separated by a space.

In some commands with parameters, "**,**" is often used to separate multiple parameters. For example,

:SYSTem:DATE <*year*>,<*month*>,<*day*>

Symbol Description

The following symbols are not sent with the commands.

1. **Braces { }**

   The contents in the braces can contain one or multiple parameters. These parameters can be omitted or used for several times. Parameters are usually

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separated by the vertical bar "|". When using the command, you must select one of the parameters.

2. **Vertical Bar |**

   The vertical bar is used to separate multiple parameters. When using the command, you must select one of the parameters.

3. **Square Brackets [ ]**

   The contents in the square brackets can be omitted.

4. **Angle Brackets < >**

   The parameter enclosed in the angle brackets must be replaced by an effective value.

Parameter Type

1. **Bool**

   The parameter can be set to ON, OFF, 1, or 0. For example,

   :SYSTem:BEEPer <*bool*>

   :SYSTem:BEEPer?

   Wherein, <*bool*> can be set to {{1|ON}|{0|OFF}}. The query returns 1 or 0.

2. **Discrete**

   The parameter can be any of the values listed. For example,

   :SYSTem:PSTatus <*sat*>

   :SYSTem:PSTatus?

   Wherein,

   - <*sat*> can be set to DEFault|OPEN.
   - The query returns an abbreviated form: DEF or OPEN.

3. **Integer**

   Unless otherwise specified, the parameter can be any integer (NR1 format) within the effective value range.

CAUTION

Do not set the parameter to a decimal, otherwise, errors will occur.

For example,

:DISPlay:GBRightness <*brightness*>

:DISPlay:GBRightness?

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Wherein, <*brightness*> can be set to an integer ranging from 1 to 100. The query returns an integer ranging from 1 to 100.

4. **Real**

   The parameter can be any real number within the effective value range, and this command accepts parameter input in decimal (NR2 format) and scientific notation (NR3 format). For example,

   :TRIGger:TIMeout:TIME <*time*>

   :TRIGger:TIMeout:TIME?

   Wherein, <*time*> can be set to any real number ranging from 1.6E-8 (16 ns) to 1E +1 (10 s). The query returns a real number in scientific notation.

5. **ASCII String**

   The parameter can be the combinations of ASCII characters. For example,

   :LAN:GATeway <*string*>

   Wherein, <*string*> can be set to

   ```
   192.168.1.1
   ```

Command Abbreviation

The keywords of all the commands are case-insensitive. They can all be in upper case or in lower case. If an abbreviation is used, you must input all the capital letters in the command. For example,

:DISPlay:GBRightness?

can be abbreviated as

:DISP:GBR?

2.2 Remote Control

The instrument supports programming and controlling the instrument by using the SCPI (Standard Commands for Programmable Instruments) commands.

PC Software

Users usually need to use the PC software to send commands to control the instrument remotely. RIGOL Sigma is recommended. When the instrument is connected to the PC via the USB interface and USB, Ultra Sigma (only supported for Win 10 operating system and below) can be used to search the instrument resource and send the command.

Log in to the RIGOL official website. Click Support and select Soft/Firmware to obtain the Ultra Sigma software package and help documentation (*https://supportcn.rigol.com/Cn/Index/listView/catid/28/tp/5/p/2.html*).

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Web Control

When the instrument is connected to the PC via the LAN interface, you can use Web Control to send SCPI commands from the PC to the instrument. The operation procedures are as follows:

1. Obtain the instrument's IP address and input it in the browser address bar to log in to the Web Control page.
2. After you enter the Web Control interface, click the "SCPI Panel Control" button to enter the SCPI Command interface.
3. Input the specified SCPI command and then click **Send & Read** to send the command. The operation process and the returned value will be displayed in the current interface.

2.2.1 Remote Control via USB

1. **Connect the device**

   Use the USB cable to connect the rear-panel USB DEVICE interface of the instrument to the USB HOST interface of the PC.

2. **Search for the device resource**

   Start up Ultra Sigma and the software will automatically search for the resource currently connected to the PC via the USB interface. You can also click **USB-TMC** to search for the resource.

3. **View the device resource**

   The resources found will appear under the "RIGOL Online Resource" directory, and the model number and USB interface information of the instrument will also be displayed.

4. **Control the instrument remotely**

   Right-click the device resource name and select "SCPI Panel Control" to open the remotely command control panel. Then you can send commands and read data through the panel. For details about the SCPI commands and programming, refer to the Programming Guide of this instrument.

2.2.2 Remote Control via LAN

1. **Connect the device**

   Use the network cable to connect the instrument to your local area network (LAN).

2. **Configure network parameters**

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Configure the network parameters of the instrument in **Utility**>**IO** menu.

3. **Search for Search device resource**

   Start up Ultra Sigma and click **LAN** to open the panel as shown in the figure below. Click **Search** and the software searches for the instrument resources currently connected to the LAN and the resources found are displayed at the right section of the window as shown in the figure below. Click **OK** to add it.

   Besides, you can input the IP address of the instrument manually into the text field under "Manual Input LAN Instrument IP", then click **TEST**. If the instrument passes the test, click **Add** to add the instrument to the LAN instrument resource list in the right section; if the instrument fails the test, please check whether the IP address that you input is correct, or use the auto search method to add the instrument resource.

4. **View the device resource**

   The resources found will appear under the "RIGOL Online Resource" directory.

5. **Control the instrument remotely**

   Right-click the device resource name and select "SCPI Panel Control" to open the remotely command control panel. Then you can send commands and read data through the panel.

6. **Load LXI webpage**

   As this instrument conforms to LXI CORE 2011 DEVICE standards, you can load LXI web page through Ultra Sigma (right-click the instrument resource name and select "LXI-Web"). Various important information about the instrument (including the model, manufacturer, serial number, description, MAC address, and IP address) will be displayed on the web page. You can also directly input the IP address of the instrument in the address bar of the PC browser to load the LXI web page.

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3 Command System

This chapter introduces the syntax, function, parameters, and usage of each command.

3.1 :ABORt Commands

3.1.1 :ABORt

Syntax

```
:ABORt
```

Description

Aborts the current measurement.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
N/A
```

3.2 :CALCulate Commands

3.2.1 :CALCulate:AM:MARKer:AOFF

Syntax

```
:CALCulate:AM:MARKer:AOFF
```

Description

Disables all the enabled markers for AM demodulation.

Parameter

N/A

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

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Format

N/A

Example

```
N/A
```

3.2.2 :CALCulate:AM:MARKer:SELect

Syntax

:CALCulate:AM:MARKer:SELect <*n*>

:CALCulate:AM:MARKer:SELect?

Description

Sets the selected marker.

Queries the selected marker.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

N/A

Return Format

The query returns 1, 2, 3, 4, 5, 6, 7, or 8.

Example

```
:CALCulate:AM:MARKer:SELect 2  /*Sets the selected marker to Marker
2.*/
:CALCulate:AM:MARKer:SELect? /*The query returns 2.*/
```

3.2.3 :CALCulate:AM:MARKer<n>:CPSearch[:STATe]

Syntax

:CALCulate:AM:MARKer<*n*>**:CPSearch[:STATe]** <*bool*>

:CALCulate:AM:MARKer<*n*>**:CPSearch[:STATe]?**

Description

Sets the status of the continuous peak search for the AM demodulation and marks the peak with the specified marker.

Queries the status of the continuous peak search for the AM demodulation.

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Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<bool>	Bool	OFF|ON|0|1	OFF|0

Remarks

N/A

Return Format

The query returns 0 or 1.

Example

```
:CALCulate:AM:MARKer1:CPSearch ON  /*Enables the continuous peak
search and marks the peak with Marker1.*/
:CALCulate:AM:MARKer1:CPSearch?  /*The query returns 1.*/
```

3.2.4 :CALCulate:AM:MARKer<n>:CMSearch[:STATe]

Syntax

:CALCulate:AM:MARKer<*n*>**:CMSearch[:STATe]** <*bool*>

:CALCulate:AM:MARKer<*n*>**:CMSearch[:STATe]?**

Description

Sets the status of the continuous Min search for the AM demodulation and marks the peak with the specified marker.

Queries the on/off status of the continuous Min search for the AM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<bool>	Bool	OFF|ON|0|1	OFF|0

Remarks

N/A

Return Format

The query returns 0 or 1.

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Example

```
:CALCulate:AM:MARKer1:CMSearch ON  /*Enables the continuous Min
search and marks the peak with Marker1.*/
:CALCulate:AM:MARKer1:CMSearch?  /*The query returns 1.*/
```

3.2.5 :CALCulate:AM:MARKer<n>:REFerence

Syntax

:CALCulate:AM:MARKer<*n*>**:REFerence** <*id*>

:CALCulate:AM:MARKer<*n*>**:REFerence?**

Description

Sets the reference marker of the selected marker.

Queries the reference marker of the selected marker.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<id>	Discrete	1|2|3|4|5|6|7|8	-

Remarks

The reference marker of any marker cannot be the marker itself.

Return Format

The query returns 1, 2, 3, 4, 5, 6, 7, or 8.

Example

```
:CALCulate:AM:MARKer1:REFerence 2  /*Sets the reference marker of
Marker1 to Marker2.*/
:CALCulate:AM:MARKer1:REFerence?  /*The query returns 2.*/
```

3.2.6 :CALCulate:AM:MARKer<n>:MAXimum:LEFT

Syntax

:CALCulate:AM:MARKer<*n*>**:MAXimum:LEFT**

Description

Searches for and marks the peak closest to the left side of the current peak with the specified marker in AM demodulation.

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Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:AM:MARKer1:MAXimum:LEFT  /*Searches for and marks the
peak closest to the left side of the current peak with Marker1.*/
```

3.2.7 :CALCulate:AM:MARKer<n>:MAXimum[:MAX]

Syntax

:CALCulate:AM:MARKer<*n*>**:MAXimum[:MAX]**

Description

In AM demodulation, performs one peak search and marks it with the specified marker.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:AM:MARKer1:MAXimum  /*Performs one peak search and marks
it Marker1.*/
```

3.2.8 :CALCulate:AM:MARKer<n>:MAXimum:NEXT

Syntax

:CALCulate:AM:MARKer<*n*>**:MAXimum:NEXT**

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Description

Searches for and marks the peak whose amplitude on the trace is next lower than that of the current peak with the specified marker in AM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:AM:MARKer1:MAXimum:NEXT  /*Performs next peak search
operation and marks it with Marker1.*/
```

3.2.9 :CALCulate:AM:MARKer<n>:MAXimum:RIGHt

Syntax

:CALCulate:AM:MARKer<*n*>**:MAXimum:RIGHt**

Description

Searches for and marks the peak closest to the right side of the current peak with the specified marker in AM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:AM:MARKer1:MAXimum:RIGHt  /*Searches for and marks the
peak closest to the right side of the current peak with Marker1.*/
```

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3.2.10 :CALCulate:AM:MARKer<n>:MINimum

Syntax

:CALCulate:AM:MARKer<*n*>:MINimum

Description

Searches for and marks the peak with the minimum amplitude on the trace with the specified marker in AM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:AM:MARKer1:MINimum /*Searches for and marks the peak
with the minimum amplitude on the trace with Marker1.*/
```

3.2.11 :CALCulate:AM:MARKer<n>:PTPeak

Syntax

:CALCulate:AM:MARKer<*n*>:PTPeak

Description

In AM demodulation, performs the Pk-Pk search.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

N/A

Return Format

N/A

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Example

```
:CALCulate:AM:MARKer1:PTPeak /*Performs the Pk-Pk search and marks
it with Marker1.*/
```

3.2.12 :CALCulate:AM:MARKer<n>:LINes[:STATe]

Syntax

:CALCulate:AM:MARKer<*n*>**:LINes[:STATe]** <*bool*>

:CALCulate:AM:MARKer<*n*>**:LINes[:STATe]?**

Description

Sets the marker line state for the specified marker in AM demodulation.

Queries the on/off status for the marker line of the specified marker.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<bool>	Bool	OFF|ON|0|1	OFF|0

Remarks

N/A

Return Format

The query returns 0 or 1.

Example

```
:CALCulate:AM:MARKer1:LINes ON  /*Enables the marker line of
Marker1.*/
:CALCulate:AM:MARKer1:LINes?  /*The query returns 1.*/
```

3.2.13 :CALCulate:AM:MARKer<n>:MODE

Syntax

:CALCulate:AM:MARKer<*n*>**:MODE** <*mode*>

:CALCulate:AM:MARKer<*n*>**:MODE?**

Description

Sets the marker mode of the specified marker for the AM demodulation type.

Queries the marker mode of the specified marker for the AM demodulation type.

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Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<mode>	Discrete	POSition|DELTa|FIXed|OFF	OFF

Remarks

- POSition: indicates Position marker.
- DELTa: indicates Delta marker.
- FIXed: indicates Fixed marker.
- OFF: disables the marker.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns POS, DELT, FIX, or OFF.

Example

```
:CALCulate:AM:MARKer1:MODE OFF  /*Disables Marker 1.*/
:CALCulate:AM:MARKer1:MODE? /*The query returns OFF.*/
```

3.2.14 :CALCulate:AM:MARKer<n>:TRACe

Syntax

:CALCulate:AM:MARKer<*n*>**:TRACe** <*type*>

:CALCulate:AM:MARKer<*n*>**:TRACe?**

Description

Sets the trace marked by the specified marker in AM demodulation.

Queries the trace marked by the specified marker in AM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<type>	Discrete	RFSPectrum|AFSPectrum| DEMod|DAVerage|DMAXimum| DMINimum	RFSPectrum

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Remarks

- RFSPectrum: trace in the RF Spectrum view.
- AFSPectrum: trace in the AF Spectrum view.
- DEMod: trace in the Waveform view.
- DAVerage: Average trace in the Waveform view.
- DMAXimum: Max Hold trace in the Waveform view.
- DMINimum: Min Hold trace in the Waveform view.

DAVerage, DMAXimum, and DMINimum are only available when you have enabled the Average state. To set or query the Average state, run the *[:SENSe]:AM:AVERage[:STATe]* command.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns RFSP, AFSP, DEM, DAV, DMAX, or DMIN.

Example

```
:CALCulate:AM:MARKer1:TRACe AFSPectrum /*Sets the trace marked by
Marker1 in AM demodulation to AFSPectrum trace.*/
:CALCulate:AM:MARKer1:TRACe? /*The query returns AFSP.*/
```

3.2.15 :CALCulate:AM:MARKer<n>:X

Syntax

:CALCulate:AM:MARKer<*n*>**:X** <*real*>

:CALCulate:AM:MARKer<*n*>**:X?**

Description

Sets the X-axis value for the specified marker in AM demodulation.

Queries the X-axis value for the specified marker in AM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<real>	Real	Refer to *Remarks*	-

Remarks

<real> can be any value within the available range of the current X axis.

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- When the selected trace is the following type, its X-axis indicates marker frequency, with the unit Hz.
  - RFSPectrum
  - AFSPectrum
- When the selected trace is the following type, its X-axis indicates marker time, with the unit s.
  - DEMod
  - DAVerage
  - DMAXimum
  - DMINimum

To set or query the marker trace of the specified marker in AM demodulation, run the *:CALCulate:AM:MARKer<n>:TRACe* command.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the X-axis value for the specified marker in real number.

Example

```
:CALCulate:AM:MARKer1:X 150000000  /*Sets the X-axis value of
Marker1 to 150 MHz.*/
:CALCulate:AM:MARKer1:X? /*The query returns 150000000.*/
```

3.2.16 :CALCulate:AM:MARKer<n>:Y

Syntax

:CALCulate:AM:MARKer<*n*>**:Y** <*real*>

:CALCulate:AM:MARKer<*n*>**:Y?**

Description

Sets the Y-axis value for the specified fixed marker in AM demodulation.

Queries the Y-axis value for the specified marker in AM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<real>	Real	--	--

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Remarks

To set or query the X-axis value for the specified marker in AM demodulation, run the *:CALCulate:AM:MARKer<n>:X* command.

To set or query the type of the analog demodulation, run the *:CONFigure:CATalog?* command.

Return Format

The query returns the Y-axis value for the specified marker in real number.

Example

```
:CALCulate:AM:MARKer1:Y  /*Sets the Y-axis value for fixed Marker1
in AM demodulation to 20.*/

:CALCulate:AM:MARKer1:Y? /*The query returns 20.*/
```

3.2.17 :CALCulate:AM:MARKer<n>:SET:CENTer

Syntax

:CALCulate:AM:MARKer<*n*>**:SET:CENTer**

Description

Sets the center frequency of the analyzer to the frequency of the specified marker in AM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<real>	Real	--	--

Remarks

If Position marker is selected, the center frequency will be set to the frequency of the current marker.

If Delta marker is selected, the center frequency will be set to the frequency of the Delta marker.

This command is valid when the marker is in the RF Spectrum view.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

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Example

```
:CALCulate:AM:MARKer1:SET:CENTer /*Sets the center frequency of the
analyzer to the frequency of the Marker1 in AM demodulation.*/
```

3.2.18 :CALCulate:FM:MARKer:AOFF

Syntax

:CALCulate:FM:MARKer:AOFF

Description

Disables all the enabled markers for FM demodulation.

Parameter

N/A

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Format

N/A

Example

```
N/A
```

3.2.19 :CALCulate:FM:MARKer:SELect

Syntax

:CALCulate:FM:MARKer:SELect <*n*>

:CALCulate:FM:MARKer:SELect?

Description

Sets the selected marker.

Queries the selected marker.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

N/A

Return Format

The query returns 1, 2, 3, 4, 5, 6, 7, or 8.

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Example

```
:CALCulate:FM:MARKer:SELect 2  /*Sets the selected marker to Marker
2.*/
:CALCulate:FM:MARKer:SELect? /*The query returns 2.*/
```

3.2.20 :CALCulate:FM:MARKer<n>:CPSearch[:STATe]

Syntax

:CALCulate:FM:MARKer<*n*>**:CPSearch[:STATe]** <*bool*>

:CALCulate:FM:MARKer<*n*>**:CPSearch[:STATe]?**

Description

Sets the status of the continuous peak search for the FM demodulation and marks the peak with the specified marker.

Queries the status of the continuous peak search for the FM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<bool>	Bool	OFF|ON|0|1	OFF|0

Description

N/A

Return Format

The query returns 0 or 1.

Example

```
:CALCulate:FM:MARKer1:CPSearch ON  /*Enables the continuous peak
search and marks the peak with Marker1.*/
:CALCulate:FM:MARKer1:CPSearch?  /*The query returns 1.*/
```

3.2.21 :CALCulate:FM:MARKer<n>:CMSearch[:STATe]

Syntax

:CALCulate:FM:MARKer<*n*>**:CMSearch[:STATe]** <*bool*>

:CALCulate:FM:MARKer<*n*>**:CMSearch[:STATe]?**

Description

Sets the status of the continuous Min search for the FM demodulation and marks the peak with the specified marker.

Queries the on/off status of the continuous Min search for the FM demodulation.

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Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<bool>	Bool	OFF|ON|0|1	OFF|0

Remarks

N/A

Return Format

The query returns 0 or 1.

Example

```
:CALCulate:FM:MARKer1:CMSearch ON  /*Enables the continuous Min
search and marks the peak with Marker1.*/
:CALCulate:FM:MARKer1:CMSearch?  /*The query returns 1.*/
```

3.2.22 :CALCulate:FM:MARKer<n>:REFerence

Syntax

:CALCulate:FM:MARKer<*n*>**:REFerence** <*id*>

:CALCulate:FM:MARKer<*n*>**:REFerence?**

Description

Sets the reference marker for the current marker.

Queries the reference marker for the current marker.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<id>	Discrete	1|2|3|4|5|6|7|8	-

Remarks

The reference marker of any marker cannot be the marker itself.

Return Format

The query returns 1, 2, 3, 4, 5, 6, 7, or 8.

Example

```
:CALCulate:FM:MARKer1:REFerence 2  /*Sets the reference marker of
Marker1 to Marker2.*/
:CALCulate:FM:MARKer1:REFerence?  /*The query returns 2.*/
```


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3.2.23 :CALCulate:FM:MARKer<n>:MAXimum:LEFT

Syntax

:CALCulate:FM:MARKer<*n*>**:MAXimum:LEFT**

Description

Searches for and marks the peak closest to the left side of the current peak with the specified marker in FM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:FM:MARKer1:MAXimum:LEFT  /*Searches for and marks the
peak closest to the left side of the current peak with Marker1.*/
```

3.2.24 :CALCulate:FM:MARKer<n>:MAXimum[:MAX]

Syntax

:CALCulate:FM:MARKer<*n*>**:MAXimum[:MAX]**

Description

In FM demodulation, performs one peak search and marks it with the specified marker.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

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Example

```
:CALCulate:FM:MARKer1:MAXimum  /*Performs one peak search and marks
it with Marker1.*/
```

3.2.25 :CALCulate:FM:MARKer<n>:MAXimum:NEXT

Syntax

:CALCulate:FM:MARKer<*n*>**:MAXimum:NEXT**

Description

Searches for and marks the peak whose amplitude on the trace is next lower than that of the current peak with the specified marker in FM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:FM:MARKer1:MAXimum:NEXT /*Performs next peak search
operation and marks it with Marker1.*/
```

3.2.26 :CALCulate:FM:MARKer<n>:MAXimum:RIGHt

Syntax

:CALCulate:FM:MARKer<*n*>**:MAXimum:RIGHt**

Description

Searches for and marks the peak closest to the right side of the current peak with the specified marker in FM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

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Return Format

N/A

Example

```
:CALCulate:FM:MARKer1:MAXimum:RIGHt  /*Searches for and marks the
peak closest to the right side of the current peak with Marker1.*/
```

3.2.27 :CALCulate:FM:MARKer<n>:MINimum

Syntax

:CALCulate:FM:MARKer<*n*>**:MINimum**

Description

Searches for and marks the peak with the minimum amplitude on the trace with the specified marker in FM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:FM:MARKer1:MINimum /*Searches for and marks the peak
with the minimum amplitude on the trace with Marker1.*/
```

3.2.28 :CALCulate:FM:MARKer<n>:PTPeak

Syntax

:CALCulate:FM:MARKer<*n*>**:PTPeak**

Description

In FM demodulation, performs the Pk-Pk search.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

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Remarks

N/A

Return Format

N/A

Example

```
:CALCulate:FM:MARKer1:PTPeak /*Performs the Pk-Pk search and marks
it with Marker1.*/
```

3.2.29 :CALCulate:FM:MARKer<n>:LINes[:STATe]

Syntax

:CALCulate:FM:MARKer<*n*>**:LINes[:STATe]** <*bool*>

:CALCulate:FM:MARKer<*n*>**:LINes[:STATe]?**

Description

Sets the marker line state for the specified marker in FM demodulation.

Queries the on/off status for the marker line of the specified marker.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<bool>	Bool	OFF|ON|0|1	OFF|0

Remarks

N/A

Return Format

The query returns 0 or 1.

Example

```
:CALCulate:FM:MARKer1:LINes ON  /*Enables the marker line of
Marker1.*/
:CALCulate:FM:MARKer1:LINes?  /*The query returns 1.*/
```

3.2.30 :CALCulate:FM:MARKer<n>:MODE

Syntax

:CALCulate:FM:MARKer<*n*>**:MODE** <*mode*>

:CALCulate:FM:MARKer<*n*>**:MODE?**

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Description

Sets the marker mode for the specified marker in FM demodulation.

Queries the marker mode for the specified marker in FM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<mode>	Discrete	POSition|DELTa|FIXed|OFF	OFF

Remarks

- POSition: indicates Position marker.
- DELTa: indicates Delta marker.
- FIXed: indicates Fixed marker.
- OFF: disables the marker.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns POS, DELT, FIX, or OFF.

Example

```
:CALCulate:FM:MARKer1:MODE OFF  /*Disables Marker 1.*/
:CALCulate:FM:MARKer1:MODE? /*The query returns OFF.*/
```

3.2.31 :CALCulate:FM:MARKer<n>:TRACe

Syntax

:CALCulate:FM:MARKer<*n*>**:TRACe** <*type*>

:CALCulate:FM:MARKer<*n*>**:TRACe?**

Description

Sets the trace marked by the specified marker in FM demodulation.

Queries the trace marked by the specified marker in FM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

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Name	Type	Range	Default
<type>	Discrete	RFSPectrum|AFSPectrum| DEMod|DAVerage|DMAXimum| DMINimum	RFSPectrum

Remarks

- RFSPectrum: trace in the RF Spectrum view.
- AFSPectrum: trace in the AF Spectrum view.
- DEMod: trace in the Waveform view.
- DAVerage: Average trace in the Waveform view.
- DMAXimum: Max Hold trace in the Waveform view.
- DMINimum: Min Hold trace in the Waveform view.

DAVerage, DMAXimum, and DMINimum are only available when you have enabled the Average state. To set or query the Average state, run the *[:SENSe]:FM:AVERage[:STATe]* command.

To set or query the type of the analog demodulation, run the *:CONFigure:CATalog?* command.

Return Format

The query returns RFSP, AFSP, DEM, DAV, DMAX, or DMIN.

Example

```
:CALCulate:FM:MARKer1:TRACe AFSPectrum /*Sets the marker trace
marked by Marker1 in FM demodulation to AFSPectrum trace.*/
:CALCulate:FM:MARKer1:TRACe? /*The query returns AFSP.*/
```

3.2.32 :CALCulate:FM:MARKer<n>:X

Syntax

:CALCulate:FM:MARKer<*n*>**:X** <*real*>

:CALCulate:FM:MARKer<*n*>**:X?**

Description

Sets the X-axis value for the specified marker in FM demodulation.

Queries the X-axis value for the specified marker in FM demodulation.

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Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<real>	Real	Refer to *Remarks*	-

Remarks

<real> can be any value within the available range of the current X axis.

- When the selected trace is the following type, its X-axis indicates marker frequency, with the unit Hz.
  - RFSPectrum
  - AFSPectrum
- When the selected trace is the following type, its X-axis indicates marker time, with the unit s.
  - DEMod
  - DAVerage
  - DMAXimum
  - DMINimum

To set or query the marker trace of the specified marker in FM demodulation, run the *:CALCulate:FM:MARKer<n>:TRACe* command.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the X-axis value of the specified marker in scientific notation.

Example

```
:CALCulate:FM:MARKer1:X 150000000  /*Sets the X-axis value of
Marker1 to 150 MHz.*/
:CALCulate:FM:MARKer1:X? /*The query returns 150000000.*/
```

3.2.33 :CALCulate:FM:MARKer<n>:Y

Syntax

:CALCulate:FM:MARKer<*n*>**:Y** <*real*>

:CALCulate:FM:MARKer<*n*>**:Y?**

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Description

Sets the Y-axis value for the specified fixed marker in FM demodulation.

Queries the Y-axis value for the specified fixed marker in FM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<real>	Real	--	--

Remarks

To set or query the X-axis value for the specified marker in FM demodulation, run the *:CALCulate:FM:MARKer<n>:X* command.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the Y-axis value of the specified marker under the current X-axis in scientific notation.

Example

```
:CALCulate:FM:MARKer1:Y 20 /*Sets the Y-axis value for fixed
Marker1 in FM demodulation to 20.*/
```

```
:CALCulate:FM:MARKer1:Y? /*The query returns 20.*/
```

3.2.34 :CALCulate:FM:MARKer<n>:SET:CENTer

Syntax

:CALCulate:FM:MARKer<*n*>**:SET:CENTer**

Description

Sets the center frequency of the analyzer to the frequency of the specified marker in FM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<real>	Real	--	--

Remarks

If Position marker is selected, the center frequency will be set to the frequency of the current marker.

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If Delta marker is selected, the center frequency will be set to the frequency of the Delta marker.

This command is valid when the marker is in the RF Spectrum view.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:FM:MARKer1:SET:CENTer /*Sets the center frequency of the
analyzer to the frequency of the Marker1 in FM demodulation.*/
```

3.2.35 :CALCulate:PM:MARKer:AOFF

Syntax

:CALCulate:PM:MARKer:AOFF

Description

Disables all the enabled markers for PM demodulation.

Parameter

N/A

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Format

N/A

Example

```
N/A
```

3.2.36 :CALCulate:PM:MARKer:SELect

Syntax

:CALCulate:PM:MARKer:SELect <*n*>

:CALCulate:PM:MARKer:SELect?

Description

Sets the selected marker.

Queries the selected marker.

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Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

N/A

Return Format

The query returns 1, 2, 3, 4, 5, 6, 7, or 8.

Example

```
:CALCulate:PM:MARKer:SELect 2  /*Sets the selected marker to Marker
2.*/
:CALCulate:PM:MARKer:SELect? /*The query returns 2.*/
```

3.2.37 :CALCulate:PM:MARKer<n>:CPSearch[:STATe]

Syntax

:CALCulate:PM:MARKer<*n*>**:CPSearch[:STATe]** <*bool*>

:CALCulate:PM:MARKer<*n*>**:CPSearch[:STATe]?**

Description

Sets the status of the continuous peak search for the PM demodulation and marks the peak with the specified marker.

Queries the status of the continuous peak search for the PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<bool>	Bool	OFF|ON|0|1	OFF|0

Description

N/A

Return Format

The query returns 0 or 1.

Example

```
:CALCulate:PM:MARKer1:CPSearch ON  /*Enables the continuous peak
search and marks the peak with Marker1.*/
:CALCulate:PM:MARKer1:CPSearch?  /*The query returns 1.*/
```


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3.2.38 :CALCulate:PM:MARKer<n>:CMSearch[:STATe]

Syntax

:CALCulate:PM:MARKer<*n*>**:CMSearch[:STATe]** <*bool*>

:CALCulate:PM:MARKer<*n*>**:CMSearch[:STATe]?**

Description

Sets the status of the continuous Min search for the PM demodulation and marks the peak with the specified marker.

Queries the on/off status of the continuous Min search for the PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<bool>	Bool	OFF|ON|0|1	OFF|0

Remarks

N/A

Return Format

The query returns 0 or 1.

Example

```
:CALCulate:PM:MARKer1:CMSearch ON  /*Enables the continuous Min
search and marks the peak with Marker1.*/
:CALCulate:PM:MARKer1:CMSearch?  /*The query returns 1.*/
```

3.2.39 :CALCulate:PM:MARKer<n>:REFerence

Syntax

:CALCulate:PM:MARKer<*n*>**:REFerence** <*id*>

:CALCulate:PM:MARKer<*n*>**:REFerence?**

Description

Sets the reference marker of the selected marker.

Queries the reference marker of the selected marker.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

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Name	Type	Range	Default
<id>	Discrete	1|2|3|4|5|6|7|8	-

Remarks

The reference marker of any marker cannot be the marker itself.

Return Format

The query returns 1, 2, 3, 4, 5, 6, 7, or 8.

Example

```
:CALCulate:PM:MARKer1:REFerence 2  /*Sets the reference marker of
Marker1 to Marker2.*/
:CALCulate:PM:MARKer1:REFerence?  /*The query returns 2.*/
```

3.2.40 :CALCulate:PM:MARKer<n>:MAXimum:LEFT

Syntax

:CALCulate:PM:MARKer<*n*>**:MAXimum:LEFT**

Description

Searches for and marks the peak closest to the left side of the current peak with the specified marker in PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:PM:MARKer1:MAXimum:LEFT  /*Searches for and marks the
peak closest to the left side of the current peak with Marker1.*/
```

3.2.41 :CALCulate:PM:MARKer<n>:MAXimum[:MAX]

Syntax

:CALCulate:PM:MARKer<*n*>**:MAXimum[:MAX]**

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Description

In PM demodulation, performs one peak search and marks it with the specified marker.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:PM:MARKer1:MAXimum  /*Performs one peak search and marks
it with Marker1.*/
```

3.2.42 :CALCulate:PM:MARKer<n>:MAXimum:NEXT

Syntax

:CALCulate:PM:MARKer<*n*>**:MAXimum:NEXT**

Description

Searches for and marks the peak whose amplitude on the trace is next lower than that of the current peak with the specified marker in PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:PM:MARKer1:MAXimum:NEXT /*Performs next peak search
operation and marks it with Marker1.*/
```

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3.2.43 :CALCulate:PM:MARKer<n>:MAXimum:RIGHt

Syntax

:CALCulate:PM:MARKer<*n*>**:MAXimum:RIGHt**

Description

Searches for and marks the peak closest to the right side of the current peak with the specified marker in PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:PM:MARKer1:MAXimum:RIGHt  /*Searches for and marks the
peak closest to the right side of the current peak with Marker1.*/
```

3.2.44 :CALCulate:PM:MARKer<n>:MINimum

Syntax

:CALCulate:PM:MARKer<*n*>**:MINimum**

Description

Searches for and marks the peak with the minimum amplitude on the trace with the specified marker in PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

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Example

```
:CALCulate:PM:MARKer1:MINimum /*Searches for and marks the peak
with the minimum amplitude on the trace with Marker1.*/
```

3.2.45 :CALCulate:PM:MARKer<n>:PTPeak

Syntax

:CALCulate:PM:MARKer<*n*>**:PTPeak**

Description

In PM demodulation, performs the Pk-Pk search.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1

Remarks

N/A

Return Format

N/A

Example

```
:CALCulate:PM:MARKer1:PTPeak /*Performs the Pk-Pk search and marks
it with Marker1.*/
```

3.2.46 :CALCulate:PM:MARKer<n>:LINes[:STATe]

Syntax

:CALCulate:PM:MARKer<*n*>**:LINes[:STATe]** <*bool*>

:CALCulate:PM:MARKer<*n*>**:LINes[:STATe]?**

Description

Sets the marker line state for the specified marker in PM demodulation.

Queries the on/off status for the marker line of the specified marker in PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<bool>	Bool	OFF|ON|0|1	OFF|0

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Remarks

N/A

Return Format

The query returns 0 or 1.

Example

```
:CALCulate:PM:MARKer1:LINes ON  /*Enables the marker line of
Marker1.*/
:CALCulate:PM:MARKer1:LINes?  /*The query returns 1.*/
```

3.2.47 :CALCulate:PM:MARKer<n>:MODE

Syntax

:CALCulate:PM:MARKer<*n*>**:MODE** <*mode*>

:CALCulate:PM:MARKer<*n*>**:MODE?**

Description

Sets the marker mode for the specified marker in PM demodulation.

Queries the marker mode for the specified marker in PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<mode>	Discrete	POSition|DELTa|FIXed|OFF	OFF

Remarks

- POSition: indicates Position marker.
- DELTa: indicates Delta marker.
- FIXed: indicates Fixed marker.
- OFF: disables the marker.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns POS, DELT, FIX, or OFF.

Example

```
:CALCulate:PM:MARKer1:MODE OFF  /*Disables Marker 1.*/
:CALCulate:PM:MARKer1:MODE? /*The query returns OFF.*/
```


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3.2.48 :CALCulate:PM:MARKer<n>:TRACe

Syntax

:CALCulate:PM:MARKer<*n*>**:TRACe** <*type*>

:CALCulate:PM:MARKer<*n*>**:TRACe?**

Description

Sets the trace marked by the specified marker in PM demodulation.

Queries the trace marked by the specified marker in PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<type>	Discrete	RFSPectrum|AFSPectrum| DEMod|DAVerage|DMAXimum| DMINimum	RFSPectrum

Remarks

- RFSPectrum: trace in the RF Spectrum view.
- AFSPectrum: trace in the AF Spectrum view.
- DEMod: trace in the Waveform view.
- DAVerage: Average trace in the Waveform view.
- DMAXimum: Max Hold trace in the Waveform view.
- DMINimum: Min Hold trace in the Waveform view.

DAVerage, DMAXimum, and DMINimum are only available when you have enabled the Average state. To set or query the Average state, run the *[:SENSe]:PM:AVERage[:STATe]* command.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns RFSPectrum, AFSPectrum, DEMod, DAVerage, DMAXimum or DMINimum.

Example

```
:CALCulate:PM:MARKer1:TRACe AFSPectrum /*Sets the marker trace
marked by Marker1 in PM demodulation to AFSPectrum trace.*/
:CALCulate:PM:MARKer1:TRACe? /*The query returns AFSP.*/
```

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3.2.49 :CALCulate:PM:MARKer<n>:X

Syntax

`:CALCulate:PM:MARKer<n>:X <real>`

`:CALCulate:PM:MARKer<n>:X?`

Description

Sets the X-axis value for the specified marker in PM demodulation.

Queries the X-axis value for the specified marker in PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<real>	Real	Refer to *Remarks*	-

Remarks

<real> can be any value within the available range of the current X axis.

- When the selected trace is the following type, its X-axis indicates marker frequency, with the unit Hz.
  - RFSPectrum
  - AFSPectrum
- When the selected trace is the following type, its X-axis indicates marker time, with the unit s.
  - DEMod
  - DAVerage
  - DMAXimum
  - DMINimum

To set or query the marker trace of the specified marker in PM demodulation, run the *:CALCulate:PM:MARKer<n>:TRACe* command.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the X-axis value of the specified marker in scientific notation.

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Example

```
:CALCulate:PM:MARKer1:X 150000000  /*Sets the X-axis value of
Marker1 to 150 MHz.*/
:CALCulate:PM:MARKer1:X? /*The query returns 150000000.*/
```

3.2.50 :CALCulate:PM:MARKer<n>:Y

Syntax

:CALCulate:PM:MARKer<*n*>**:Y** <*real*>

:CALCulate:PM:MARKer<*n*>**:Y?**

Description

Sets the Y-axis value for the specified fixed marker in PM demodulation.

Queries the Y-axis value for the specified fixed marker in PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<real>	Real	--	--

Remarks

To set or query the X-axis value for the specified marker in PM demodulation, run the *:CALCulate:PM:MARKer<n>:X* command.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the Y-axis value of the specified marker under the current X-axis in scientific notation.

Example

```
:CALCulate:PM:MARKer1:Y 20 /*Sets the Y-axis value for fixed
Marker1 in PM demodulation to 20.*/
```

```
:CALCulate:PM:MARKer1:Y? /*The query returns 20.*/
```

3.2.51 :CALCulate:PM:MARKer<n>:SET:CENTer

Syntax

:CALCulate:PM:MARKer<*n*>**:SET:CENTer**

Description

Sets the center frequency of the analyzer to the frequency of the specified marker in PM demodulation.

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Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3|4|5|6|7|8	1
<real>	Real	--	--

Remarks

If Position marker is selected, the center frequency will be set to the frequency of the current marker.

If Delta marker is selected, the center frequency will be set to the frequency of the Delta marker.

This command is valid when the marker is in the RF Spectrum view.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

N/A

Example

```
:CALCulate:PM:MARKer1:SET:CENTer /*Sets the center frequency of the
analyzer to the frequency of the Marker1 in PM demodulation.*/
```

3.3 :CONFigure Commands

3.3.1 :CONFigure?

Syntax

`:CONFigure?`

Description

Queries the current measurement function.

Return Format

The query returns AM, FM, or PM.

3.3.2 :CONFigure:CATalog?

Syntax

`:CONFigure:CATalog?`

Description

Queries the currently supported measurement application.

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3.4 :CALibration Commands

3.4.1 :CALibration[:ALL]

Syntax

`:CALibration[:ALL]`

Description

Executes self-calibration immediately.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
:CALibration:ALL  /*Executes self-calibration immediately.*/
```

3.4.2 :CALibration:AUTO

Syntax

`:CALibration:AUTO` <*bool*>]

`:CALibration:AUTO?`

Description

Enables or disables auto calibration.

Queries the on/off status of auto calibration.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	OFF|0

Remarks

N/A

Return Format

The query returns 0 or 1.

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Example

```
:CALibration:AUTO ON  /*Enables the auto calibration.*/
:CALibration:AUTO?  /*The query returns 1.*/
```

3.5 :Display Commands

3.5.1 :DISPlay:AM:WINDow<n>:TRACe:Y[:SCALe]:AUTo:ONCE

Syntax

:DISPlay:AM:WINDow[<*n*>]**:TRACe:Y[:SCALe]:AUTo:ONCE**

Description

Auto sets the Y-axis scale value and reference value and in AM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3	1

Remarks

- n = 1 or not specified: RF Spectrum window. The default Y-axis reference value is 0 dB. Its range is from -170 dB to 25 dB. The default Y-axis scale value is 10 dB. Its range is from 0.1 dB to 20 dB.
- n = 2: (Demod) Waveform window. The default Y-axis reference value is 0%. Its range is from -100% to 100%. The default Y-axis scale value is 20%. Its range is from 0.1% to 1000%.
- n = 3: AF Spectrum window. The default Y-axis reference value is 100%. Its range is from 0.01% to 10000%. The default Y-axis scale value is 10 dB. Its range is from 0.1 dB to 20 dB.

3.5.2 :DISPlay:AM:WINDow[<n>]:TRACe:Y[:SCALe]:PDIVision

Syntax

:DISPlay:AM:WINDow[<*n*>]**:TRACe:Y[:SCALe]:PDIVision** <*rel*>

:DISPlay:AM:WINDow[<*n*>]**:TRACe:Y[:SCALe]:PDIVision?**

Description

Sets the Y-axis scale per division for the specified window in AM demodulation.

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Queries the Y-axis scale per division for the specified window in AM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3	1
<rel>	Real	Refer to *Remarks*	Refer to *Remarks*

Remarks

- n = 1 or not specified: RF Spectrum window. The default value of <rel> is 10 dB. The range of <rel> is from 0.1 dB to 20 dB.
- n = 2: (Demod) Waveform window. The default value of <rel> is 20%. The range of <rel> is from 0.1% to 1000%.
- n = 3: AF Spectrum window. The default value of <rel> is 10 dB. The range of <rel> is from 0.1 dB to 20 dB.

Return Format

The query returns the Y-axis scale value in real number.

Example

```
:DISPlay:AM:WINDow:TRACe:Y:PDIVision 0.3  /*Sets the Y-axis scale value in the RF Spectrum window to 0.3 dB.*/
:DISPlay:AM:WINDow:TRACe:Y:PDIVision?  /*The query returns 0.3.*/
```

3.5.3 :DISPlay:AM:WINDow[<n>]:TRACe:Y[:SCALe]:RLEVel

Syntax

:DISPlay:AM:WINDow[<*n*>]**:TRACe:Y[:SCALe]:RLEVel** <*amptd*>

:DISPlay:AM:WINDow[<*n*>]**:TRACe:Y[:SCALe]:RLEVel?**

Description

Sets the reference level of the specified window in AM demodulation.

Queries the reference level of the specified window in AM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3	1

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Name	Type	Range	Default
<amptd>	Real	Refer to *Remarks*	Refer to *Remarks*

Remarks

- n = 1 or not specified: RF Spectrum window. The default value of <amptd> is 0 dBm. The range of <amptd> is from -170 dBm to +25 dBm.
- n = 2: (Demod) Waveform window. The default value of <amptd> is 0%. The range of <amptd> is from -100% to 100%.
- n = 3: AF Spectrum window. The default value of <amptd> is 100%. The range of <amptd> is from 0.01% to 10000%.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the reference value in real number.

Example

```
:DISPlay:AM:WINDow:TRACe:Y:RLEVel -10 /*Sets the reference value in
the RF Spectrum window to -10 dBm.*/
:DISPlay:AM:WINDow:TRACe:Y:RLEVel? /*The query returns -10.*/
```

3.5.4 :DISPlay:FM:WINDow<n>:TRACe:Y[:SCALe]:AUTo:ONCE

Syntax

:DISPlay:FM:WINDow[<*n*>]**:TRACe:Y[:SCALe]:AUTo:ONCE**

Description

Auto sets the Y-axis scale value and reference value and in FM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3	1

Remarks

- n = 1 or not specified: RF Spectrum window. The default Y-axis reference value is 0 dB. Its range is from -170 dB to 25 dB. The default Y-axis scale value is 10 dB. Its range is from 0.1 dB to 20 dB.

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- n = 2: (Demod) Waveform window. The default Y-axis reference value is 0 Hz. Its range is from -1 MHz to 1 MHz. The default Y-axis scale value is 100 Hz. Its range is from 1 Hz to 100 kHz.
- n = 3: AF Spectrum window. The default Y-axis reference value is 100 kHz. Its range is from 1 Hz to 100 MHz. The default Y-axis scale value is 10 dB. Its range is from 0.1 dB to 20 dB.

3.5.5 :DISPlay:FM:WINDow[<n>]:TRACe:Y[:SCALe]:PDIVision

Syntax

`:DISPlay:FM:WINDow[<n>]:TRACe:Y[:SCALe]:PDIVision <rel>`

`:DISPlay:FM:WINDow[<n>]:TRACe:Y[:SCALe]:PDIVision?`

Description

Sets the Y-axis scale per division for the specified window in FM demodulation.

Queries the Y-axis scale per division for the specified window in FM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3	1
<rel>	Real	Refer to *Remarks*	Refer to *Remarks*

Remarks

- n = 1 or not specified: RF Spectrum window. The default value of <rel> is 10 dB. The range of <rel> is from 0.1 dB to 20 dB.
- n = 2: (Demod) Waveform window. The default value of <rel> is 100 Hz. The range of <rel> is from 1 Hz to 100 kHz.
- n = 3: AF Spectrum window. The default value of <rel> is 10 dB. The range of <rel> is from 0.1 dB to 20 dB.

Return Format

The query returns the Y-axis scale value in real number.

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Example

```
:DISPlay:FM:WINDow:TRACe:Y:PDIVision 0.3  /*Sets the Y-axis scale
value in the RF Spectrum window to 0.3.*/
:DISPlay:FM:WINDow:TRACe:Y:PDIVision?  /*The query returns 0.3.*/
```

3.5.6 :DISPlay:FM:WINDow[<n>]:TRACe:Y[:SCALe]:RLEVel

Syntax

:DISPlay:FM:WINDow[<*n*>]**:TRACe:Y[:SCALe]:RLEVel** <*amptd*>

:DISPlay:FM:WINDow[<*n*>]**:TRACe:Y[:SCALe]:RLEVel?**

Description

Sets the reference level of the specified window in FM demodulation.

Queries the reference level of the specified window in FM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3	1
<amptd>	Real	Refer to *Remarks*	Refer to *Remarks*

Remarks

- n = 1 or not specified: RF Spectrum window. The default value of <amptd> is 0 dBm. The range of <amptd> is from -170 dBm to +25 dBm.
- n = 2: (Demod) Waveform window. The default value of <amptd> is 0 Hz. The range of <amptd> is from -1 MHz to 1 MHz.
- n = 3: AF Spectrum window. The default value of <amptd> is 100 kHz. The range of <amptd> is from 1 Hz to 100 MHz.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the reference value in real number.

Example

```
:DISPlay:FM:WINDow:TRACe:Y:RLEVel -10 /*Sets the reference value in
the RF Spectrum window to -10 dBm.*/
:DISPlay:FM:WINDow:TRACe:Y:RLEVel? /*The query returns -10.*/
```


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3.5.7 :DISPlay:PM:WINDow<n>:TRACe:Y[:SCALe]:AUTo:ONCE

Syntax

`:DISPlay:PM:WINDow[<n>]:TRACe:Y[:SCALe]:AUTo:ONCE`

Description

Auto sets the Y-axis scale value and reference value and in PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3	1

Remarks

- n = 1 or not specified: RF Spectrum window. The default Y-axis reference value is 0 dB. Its range is from -170 dB to 25 dB. The default Y-axis scale value is 10 dB. Its range is from 0.1 dB to 20 dB.
- n = 2: (Demod) Waveform window. The default Y-axis reference value is 0 rad. Its range is from -10 Mrad to 10 Mrad. The default Y-axis scale value is 1 rad. Its range is from 0.1 rad to 200 rad.
- n = 3: AF Spectrum window. The default Y-axis reference value is 10 rad. Its range is from 0.01 rad to 10000 rad. The default Y-axis scale value is 10 dB. Its range is from 0.1 dB to 20 dB.

3.5.8 :DISPlay:PM:WINDow[<n>]:TRACe:Y[:SCALe]:PDIVision

Syntax

`:DISPlay:PM:WINDow[<n>]:TRACe:Y[:SCALe]:PDIVision <rel>`

`:DISPlay:PM:WINDow[<n>]:TRACe:Y[:SCALe]:PDIVision?`

Description

Sets the Y-axis scale per division for the specified window in PM demodulation.

Queries the Y-axis scale per division for the specified window in PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3	1

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Name	Type	Range	Default
<rel>	Real	Refer to *Remarks*	Refer to *Remarks*

Remarks

- n = 1 or not specified: RF Spectrum window. The default value of <rel> is 10 dB. The range of <rel> is from 0.1 dB to 20 dB.
- n = 2: (Demod) Waveform window. The default value of <rel> is 100 Hz. The range of <rel> is from 0.1 rad to 200 rad.
- n = 3: AF Spectrum window. The default value of <rel> is 10 dB. The range of <rel> is from 0.1 dB to 20 dB.

Return Format

The query returns the Y-axis scale value in real number.

Example

```
:DISPlay:PM:WINDow:TRACe:Y:PDIVision 0.3  /*Sets the Y-axis scale value in the RF Spectrum window to 0.3 dB*/
:DISPlay:PM:WINDow:TRACe:Y:PDIVision?  /*The query returns 0.3.*/
```

3.5.9 :DISPlay:PM:WINDow[<n>]:TRACe:Y[:SCALe]:RLEVel

Syntax

:DISPlay:PM:WINDow[<*n*>]**:TRACe:Y[:SCALe]:RLEVel** <*amptd*>

:DISPlay:PM:WINDow[<*n*>]**:TRACe:Y[:SCALe]:RLEVel?**

Description

Sets the reference level of the specified window in PM demodulation.

Queries the reference level of the specified window in PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Discrete	1|2|3	1
<amptd>	Real	Refer to *Remarks*	Refer to *Remarks*

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Remarks

- n = 1 or not specified: RF Spectrum window. The default value of <amptd> is 0 dBm. The range of <amptd> is from -170 dBm to +25 dBm.
- n = 2: (Demod) Waveform window. The default value of <amptd> is 0 rad. The range of <amptd> is from -10 Mrad to 10 Mrad.
- n = 3: AF Spectrum window. The default value of <amptd> is 10 rad. The range of <amptd> is from 0.01 rad to 10000 rad.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the reference value in real number.

Example

```
:DISPlay:PM:WINDow:TRACe:Y:RLEVel -10 /*Sets the reference value in
the RF Spectrum window to -10 dBm.*/
:DISPlay:PM:WINDow:TRACe:Y:RLEVel? /*The query returns -10.*/
```

3.6 :FETCh Commands

3.6.1 :FETCh:AM[<n>]?

Syntax

:FETCh:AM[<*n*>]?

Description

Queries the trace data and measurement results of AM demodulation.

Parameter

Name	Type	Range	Default
<n>	Integer	0 to 6	1

Remarks

- When n is set to 0,

  the query returns the RF trace data in (x,y) format. The unit of x-axis is Hz, and the unit of Y-axis is dBm.
- When n is set to 1 or not specified, the query returns the following measurement results, separated by commas.

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- RF Center Frequency (Hz)
- Carrier Power (dBm)
- Carrier Frequency Error (Hz)
- Modulation Rate (Hz)
- SINAD (dB)
- Distortion/Total Vrms (%)
- THD (%)
- AM Modulation Depth Peak+ (%) If the Average state is enabled, the query returns the measurement results after being averaged; if disabled, the query returns the current measurement results.
- AM Modulation Depth Peak- (%) If the Average state is enabled, the query returns the measurement results after being averaged; if disabled, the query returns the current measurement results.
- AM Modulation Depth (Pk-Pk)/2 (%) If the Average state is enabled, the query returns the measurement results after being averaged; if disabled, the query returns the current measurement results.
- AM Modulation Depth RMS (%) If the Average state is enabled, the query returns the measurement results after being averaged; if disabled, the query returns the current measurement results.
- AM Modulation Depth Peak+ Max Hold (%) If the Average state is disabled, the query returns 0.
- AM Modulation Depth Peak- Max Hold(%) If the Average state is disabled, the query returns 0.
- AM Modulation Depth (Pk-Pk)/2 Max Hold (%) If the Average state is disabled, the query returns 0.
- AM Modulation Depth RMS Max Hold (%) If the Average state is disabled, the query returns 0.
- SNR (dB)

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- When n is set to 2,

  the query returns the Demod Min trace data in (x,y) format. The unit of x-axis is second (s), and the unit of Y-axis is %. If the Average state is disabled, the query returns NAN.

- When n is set to 3,

  the query returns the Demod Max trace data in (x,y) format. The unit of x-axis is second (s), and the unit of Y-axis is %. If the Average state is disabled, the query returns NAN.

- When n is set to 4,

  the query returns the Demod trace data in (x,y) format. The unit of x-axis is second (s), and the unit of Y-axis is %.

- When n is set to 5,

  the query returns the Demod Average trace data in (x,y) format. The unit of x-axis is second (s), and the unit of Y-axis is %. If the Average state is disabled, the query returns NAN.

- When n is set to 6,

  the query returns the AF trace data in (x,y) format. The unit of x-axis is Hz, and the unit of Y-axis is %.

To set or query the Average state, run the *[:SENSe]:AM:AVERage[:STATe]* command.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the trace data and measurement results of AM demodulation in strings.

Example

```
:FETCh:AM1?  /*The query returns
1000000000.000,1.095,0.000,27969.727,46.116,0.495,0.193,17.923,-18.0
74,17.998,12.537,18.455,-18.501,18.478,12.882,46.832.*/
```

3.6.2 :FETCh:FM[<n>]?

Syntax

:FETCh:FM[<*n*>]?

Description

Queries the trace data and measurement results of FM demodulation.

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Parameter

Name	Type	Range	Default
<n>	Integer	0 to 6	1

Remarks

- When n is set to 0,

  the query returns the RF trace data in (x,y) format. The unit of x-axis is Hz, and the unit of Y-axis is dBm.

- When n is set to 1 or not specified, the query returns the following measurement results, separated by commas.

  - RF Center Frequency (Hz)
  - Carrier Power (dBm)
  - Carrier Frequency Error (Hz)
  - Modulation Rate (Hz)
  - SINAD (dB)
  - Distortion/Total Vrms (%)
  - THD (%)
  - FM Deviation Peak+ (Hz) If the Average state is enabled, the query returns the measurement results after being averaged; if disabled, the query returns the current measurement results.
  - FM Deviation Peak- (Hz) If the Average state is enabled, the query returns the measurement results after being averaged; if disabled, the query returns the current measurement results.
  - FM Deviation (Pk-Pk)/2 (Hz) If the Average state is enabled, the query returns the measurement results after being averaged; if disabled, the query returns the current measurement results.
  - FM Deviation RMS (Hz) If the Average state is enabled, the query returns the measurement results after being averaged; if disabled, the query returns the current measurement results.

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- FM Deviation Peak+ Max Hold (Hz) If the Average state is disabled, the query returns 0.
- FM Deviation Peak- Max Hold(Hz) If the Average state is disabled, the query returns 0.
- FM Deviation (Pk-Pk)/2 Max Hold (Hz) If the Average state is disabled, the query returns 0.
- FM Deviation RMS Max Hold (Hz) If the Average state is disabled, the query returns 0.
- SNR (dB)

- When n is set to 2,

  the query returns the Demod Min trace data in (x,y) format. The unit of x-axis is second (s), and the unit of Y-axis is Hz. If the Average state is disabled, the query returns NAN.
- When n is set to 3,

  the query returns the Demod Max trace data in (x,y) format. The unit of x-axis is second (s), and the unit of Y-axis is Hz. If the Average state is disabled, the query returns NAN.
- When n is set to 4,

  the query returns the Demod trace data in (x,y) format. The unit of x-axis is second (s), and the unit of Y-axis is Hz.
- When n is set to 5,

  the query returns the Demod Average trace data in (x,y) format. The unit of x-axis is second (s), and the unit of Y-axis is Hz. If the Average state is disabled, the query returns NAN.
- When n is set to 6,

  the query returns the AF trace data in (x,y) format. The unit of x-axis is Hz, and the unit of Y-axis is Hz.

To set or query the Average state, run the *[:SENSe]:FM:AVERage[:STATe]* command.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the trace data and measurement results of AM demodulation in strings.

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Example

```
:FETCh:FM1?  /*The query returns
1000000000.000,1.105,7.167,27969.727,13.957,20.053,13.310,772.399,-7
83.714,778.056,516.163,963.388,-1184.446,1073.917,512.596,16.479.*/
```

3.6.3 :FETCh:PM[<n>]?

Syntax

:FETCh:PM[<*n*>]?

Description

Queries the trace data and measurement results of PM demodulation.

Parameter

Name	Type	Range	Default
<n>	Integer	0 to 6	1

Remarks

- When n is set to 0,

  the query returns the RF trace data in (x,y) format. The unit of x-axis is Hz, and the unit of Y-axis is dBm.

- When n is set to 1 or not specified, the query returns the following measurement results, separated by commas.

  - RF Center Frequency (Hz)
  - Carrier Power (dBm)
  - Carrier Frequency Error (Hz)
  - Modulation Rate (Hz)
  - SINAD (dB)
  - Distortion/Total Vrms (%)
  - THD (%)
  - PM radians Peak+ (rad) If the Average state is enabled, the query returns the measurement results after being averaged; if disabled, the query returns the current measurement results.

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- PM radians Peak- (rad) If the Average state is enabled, the query returns the measurement results after being averaged; if disabled, the query returns the current measurement results.
- PM radians (Pk-Pk)/2 (rad) If the Average state is enabled, the query returns the measurement results after being averaged; if disabled, the query returns the current measurement results.
- PM radians RMS (rad) If the Average state is enabled, the query returns the measurement results after being averaged; if disabled, the query returns the current measurement results.
- PM radians Peak+ Max Hold (rad) If the Average state is disabled, the query returns 0.
- PM radians Peak- Max Hold (rad) If the Average state is disabled, the query returns 0.
- PM radians (Pk-Pk)/2 Max Hold (rad) If the Average state is disabled, the query returns 0.
- PM radians RMS Max Hold (rad) If the Average state is disabled, the query returns 0.
- SNR (dB)

- When n is set to 2,

  the query returns the Demod Min trace data in (x,y) format. The unit of x-axis is second (s), and the unit of Y-axis is rad. If the Average state is disabled, the query returns NAN.
- When n is set to 3,

  the query returns the Demod Max trace data in (x,y) format. The unit of x-axis is second (s), and the unit of Y-axis is rad. If the Average state is disabled, the query returns NAN.
- When n is set to 4,

  the query returns the Demod trace data in (x,y) format. The unit of x-axis is second (s), and the unit of Y-axis is rad.
- When n is set to 5,

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the query returns the Demod Average trace data in (x,y) format. The unit of x-axis is second (s), and the unit of Y-axis is rad. If the Average state is disabled, the query returns NAN.

- When n is set to 6,

  the query returns the AF trace data in (x,y) format. The unit of x-axis is Hz, and the unit of Y-axis is rad.

To set or query the Average state, run the *[:SENSe]:PM:AVERage[:STATe]* command.

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the trace data and measurement results of AM demodulation in strings.

Example

```
:FETCh:PM1?  /*The query returns
1000000000.000,1.106,7.150,27969.727,5.365,54.005,13.657,0.017,-0.03
4,0.025,0.018,0.112,-0.103,0.107,0.030,5.655.*/
```

3.7 :INITiate Commands

3.7.1 :INITiate:CONTinuous

Syntax

:INITiate:CONTinuous <*bool*>

:INITiate:CONTinuous?

Description

Sets the current measurement to Continuous (ON|1) or Single (OFF|0) measurement.

Queries the current measurement state.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	ON|1

Remarks

N/A

Return Format

The query returns 1 or 0.

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Example

```
:INITiate:CONTinuous OFF  /*Sets the measurement status to Single.*/
:INITiate:CONTinuous?  /*The query returns 0.*/
```

3.7.2 :INITiate[:IMMediate]

Syntax

:INITiate[:IMMediate]

Description

Initiates one sweep when the average state is disabled; initiates one average/hold measurement when the average state is enabled.

Parameter

N/A

Return Format

N/A

Example

```
N/A
```

3.7.3 :INITiate:RESTart

Syntax

:INITiate:RESTart

Description

Restarts to initiate a sweep.

3.8 :INSTrument Commands

3.8.1 :INSTrument:COUPle:FREQuency:CENTer

Syntax

:INSTrument:COUPle:FREQuency:CENTer <*enum*>

:INSTrument:COUPle:FREQuency:CENTer?

Description

Sets the setting status of the global center frequency of the instrument.

Queries the setting status of the global center frequency of the instrument.

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Parameter

Name	Type	Range	Default
<enum>	Discrete	ALL|NONE	NONE

Remarks

- NONE: turns off the global center frequency.

  ALL: turns on the global center frequency.
- If you execute this command in any mode, the center frequency in the current mode is set to the global center frequency. Adjusting the center frequency in a mode, while the global center frequency is on, will modify the global center frequency.

Return Format

The query returns ALL or NONE.

Example

```
:INSTrument:COUPle:FREQuency:CENTer ALL /*Enables the global CF
mode.*/
:INSTrument:COUPle:FREQuency:CENTer? /*The query returns ALL.*/
```

3.8.2 :INSTrument:SCReen:CATalog?

Syntax

`:INSTrument:SCReen:CATalog?`

Description

Queries the available measurement modes displayed at the bottom of the screen.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
N/A
```


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3.8.3 :INSTrument:SCReen:CREate

Syntax

`:INSTrument:SCReen:CREate`

Description

Creates a new measurement mode label at the bottom of the screen.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
N/A
```

3.8.4 :INSTrument:SCReen:DELete

Syntax

`:INSTrument:SCReen:DELete`

Description

Deletes the currently selected measurement mode label at the bottom of the screen.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
N/A
```

3.8.5 :INSTrument:SCReen:DELete:ALL

Syntax

`:INSTrument:SCReen:DELete:ALL`

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Description

Deletes all the currently not selected measurement mode label at the bottom of the screen.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
N/A
```

3.8.6 :INSTrument:SCReen:SELect

Syntax

:INSTrument:SCReen:SELect <*name*>

:INSTrument:SCReen:SELect?

Description

Switches to the specified screen.

Queries the currently selected screen.

Parameter

Name	Type	Range	Default
<name>	Discrete	The label can contain English letters and numbers, as well as some symbols.	-

Remarks

To query the screen name, run the *:INSTrument:SCReen:CATalog?* command.

Example

```
:INSTrument:SCReen:SELect AM 2  /*Switches the screen to AM 2.*/
:INSTrument:SCReen:SELect?  /*The query returns AM 2.*/
```

3.8.7 :INSTrument[:SELect]

Syntax

:INSTrument[:SELect] <*mode*>

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:INSTrument[:SELect]?

Description

Selects the working mode of the instrument.

Queries the working mode of the instrument.

Parameter

Name	Type	Range	Default
<mode>	Discrete	SA|GPSA_TG|RTSA|RTSA_UFS|GPSA_ACP|GPSA_CNR|GPSA_CHPower|GPSA_TOI|GPSA_HARModist|GPSA_OBW|GPSA_TPOWer|EMI|VSA|AM|FM|PM	SA

Remarks

You are not allowed to perform the follow-up step until the command for switching to the specified working mode is completed and takes effects.

Example

```
:INSTrument:SELect AM /*The instrument enters the AM mode.*/
:INSTrument:SELect? /*The query returns AM.*/
```

3.9 :LAN Commands

The :LAN commands are used to set and query the LAN parameters.

3.9.1 :LAN:DHCP

Syntax

:LAN:DHCP <*bool*>

:LAN:DHCP?

Description

Turns on or off the DHCP configuration mode; or queries the on/off status of the current DHCP configuration mode.

Parameter

Name	Type	Range	Default
<bool>	Bool	{{1|ON}|{0|OFF}}	1|ON

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Remarks

- When the three IP configuration types (DHCP, Auto IP, and Static IP) are all turned on, the priority of the parameter configuration from high to low is "DHCP", "Auto IP", and "Static IP". The three IP configuration types cannot be all turned off at the same time.
- When DHPC is valid, the DHCP server in the current network will assign the network parameters (such as the IP address) for the oscilloscope.
- After the *:LAN:APPLy* command is executed, the configuration type can take effect immediately.

Return Format

The query returns 1 or 0.

Example

```
:LAN:DHCP OFF        /*Disables DHCP configuration mode.*/
:LAN:DHCP?           /*The query returns 0.*/
```

3.9.2 :LAN:AUToip

Syntax

:LAN:AUToip <*bool*>

:LAN:AUToip?

Description

Turns on or off the Auto IP configuration mode; or queries the on/off status of the current Auto IP configuration mode.

Parameter

Name	Type	Range	Default
<bool>	Bool	{{1|ON}|{0|OFF}}	1|ON

Remarks

When the auto IP mode is valid, disable DHCP manually. In auto IP mode, the oscilloscope will get the IP address (ranging from 169.254.0.1 to 169.254.255.254) and the subnet mask (255.255.0.0) automatically according to the current network configuration.

Return Format

The query returns 1 or 0.

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Example

```
:LAN:AUToip OFF          /*Disables the Auto IP configuration
mode.*/
:LAN:AUToip?             /*The query returns 0.*/
```

3.9.3 :LAN:MANual

Syntax

:LAN:MANual <*bool*>

:LAN:MANual?

Description

Turns on or off the static IP configuration mode; or queries the on/off status of the static IP configuration mode.

Parameter

Name	Type	Range	Default
<bool>	Bool	{{1|ON}|{0|OFF}}	0|OFF

Remarks

When the static IP mode is valid, disable DHCP and Auto IP manually. You can self-define the network parameters of the oscilloscope, such as IP address, subnet mask, gateway, and DNS address. For the setting of the IP address, refer to the *:LAN:IPADdress* command. For the setting of the subnet mask, refer to the *:LAN:SMASk* command. For the setting of the gateway, refer to the *:LAN:GATeway* command. For the setting of DNS, refer to the *:LAN:DNS* command.

Return Format

The query returns 1 or 0.

Example

```
:LAN:MANual ON       /*Enables the static IP configuration mode.*/
:LAN:MANual?            /*The query returns 1.*/
```

3.9.4 :LAN:IPADdress

Syntax

:LAN:IPADdress <*string*>

:LAN:IPADdress?

Description

Sets or queries the IP address of the instrument.

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Parameter

Name	Type	Range	Default
<string>	ASCII String	Refer to *Remarks*	-

Remarks

- The format of <string> is nnn.nnn.nnn.nnn. The range of the first section of "nnn" is from 0 to 223 (except 127), and the ranges of the other three sections of "nnn" are from 0 to 255.
- Only when the IP configuration mode is set to Static IP mode, and both DHCP and Auto IP are disabled, can you use the set IP address.

Return Format

The query returns the current IP address in strings.

Example

```
:LAN:IPADdress 192.168.1.10     /*Sets the IP address to
192.168.1.10.*/
:LAN:IPADdress?           /*The query returns 192.168.1.10.*/
```

3.9.5 :LAN:SMASk

Syntax

:LAN:SMASk <*string*>

:LAN:SMASk?

Description

Sets or queries the subnet mask.

Parameter

Name	Type	Range	Default
<string>	ASCII String	Refer to *Remarks*	-

Remarks

- The format of <string> is nnn.nnn.nnn.nnn. The range of the section "nnn" is from 0 to 255.
- Only when the IP configuration mode is set to Static IP mode, and both DHCP and Auto IP are disabled, can you use the set subnet mask.

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Return Format

The query returns the current subnet mask in strings.

Example

```
:LAN:SMASk 255.255.255.0    /*Sets the subnet mask to
255.255.255.0.*/
:LAN:SMASk?     /*The query returns 255.255.255.0.*/
```

3.9.6 :LAN:GATeway

Syntax

:LAN:GATeway <*string*>

:LAN:GATeway?

Description

Sets or queries the default gateway.

Parameter

Name	Type	Range	Default
<string>	ASCII String	Refer to *Remarks*	-

Remarks

- The format of <string> is nnn.nnn.nnn.nnn. The range of the first section of "nnn" is from 0 to 223 (except 127), and the ranges of the other three sections of "nnn" are from 0 to 255.
- Only when the IP configuration mode is set to Static IP mode, and both DHCP and Auto IP are disabled, can you use the set default gateway.

Return Format

The query returns the current gateway in strings.

Example

```
:LAN:GATeway 192.168.1.1          /*Sets the default gateway to
192.168.1.1.*/
:LAN:GATeway?                    /*The query returns 192.168.1.1.*/
```

3.9.7 :LAN:DNS

Syntax

:LAN:DNS <*string*>

:LAN:DNS?

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Description

Sets or queries the DNS address.

Parameter

Name	Type	Range	Default
<string>	ASCII String	Refer to *Remarks*	-

Remarks

- The format of <string> is nnn.nnn.nnn.nnn. The range of the first section of "nnn" is from 0 to 223 (except 127), and the ranges of the other three sections of "nnn" are from 0 to 255.
- Only when the IP configuration mode is set to Static IP mode, and both DHCP and Auto IP are disabled, can you use the set DNS address.

Return Format

The query returns the current DNS address in strings.

Example

```
:LAN:DNS 192.168.1.1          /*Sets the DNS address to
192.168.1.1.*/
:LAN:DNS?                    /*The query returns 192.168.1.1.*/
```

3.9.8 :LAN:MAC?

Syntax

:LAN:MAC?

Description

Queries the MAC address of the instrument.

Parameter

N/A

Remarks

N/A

Return Format

The query returns the MAC address in strings. For example, 00:19:AF:00:11:22.

Example

```
N/A
```


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3.9.9 :LAN:DSERver?

Syntax

```
:LAN:DSERver?
```

Description

Queries the address of the DHCP server.

Parameter

N/A

Remarks

N/A

Return Format

The query returns the address of the DHCP server in strings.

Example

```
N/A
```

3.9.10 :LAN:STATus?

Syntax

```
:LAN:STATus?
```

Description

Queries the current network configuration status.

Parameter

N/A

Remarks

- **UNLINK:** not connected.
- **CONNECTED:** the network is successfully connected.
- **INIT:** the instrument is acquiring an IP address.
- **IPCONFLICT:** there is an IP address conflict.
- **BUSY:** please wait...
- **CONFIGURED:** the network configuration has been successfully configured.
- **DHCPFAILED:** the DHCP configuration has failed.

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- **INVALIDIP:** invalid IP.
- **IPLOSE:** IP lost.

Return Format

The query returns UNLINK, CONNECTED, INIT, IPCONFLICT, BUSY, CONFIGURED, DHCPFAILED, INVALIDIP, or IPLOSE.

Example

```
N/A
```

3.9.11 :LAN:VISA?

Syntax

:LAN:VISA? [<*type*>]

Description

Queries the VISA address of the instrument.

Parameter

Name	Type	Range	Default
<type>	Discrete	{USB|LXI}	-

Remarks

This command contains a parameter "type" and it is used to set or query the address type. By default, it returns the LXI address.

Return Format

The query returns the VISA address in strings.

Example

```
N/A
```

3.9.12 :LAN:MDNS

Syntax

:LAN:MDNS <*bool*>

:LAN:MDNS?

Description

Enables or disables mDNS; or queries the mDNS status.

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Parameter

Name	Type	Range	Default
<bool>	Bool	{{1|ON}|{0|OFF}}	0|OFF

Remarks

N/A

Return Format

The query returns 1 or 0.

Example

```
:LAN:MDNS ON                    /*Enables mDNS.*/
:LAN:MDNS?                      /*The query returns 1.*/
```

3.9.13 :LAN:APPLy

Syntax

:LAN:APPLy

Description

Applies the network configuration.

Parameter

N/A

Remarks

After configuring all the LAN-related parameters with the :LAN commands, you need to send this command to make all the LAN configurations take effect.

Return Format

N/A

Example

```
N/A
```

3.9.14 :LAN:HOST:NAME

Syntax

:LAN:HOST:NAME <*name*>

:LAN:HOST:NAME?

Description

Sets or queries the host name.

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Parameter

Name	Type	Range	Default
<name>	ASCII String	The label can contain English letters and numbers, as well as some symbols.	-

Remarks

N/A

Return Format

The query returns the host name in ASCII strings.

Example

```
N/A
```

3.9.15 :LAN:DESCription

Syntax

:LAN:DESCription <*name*>

:LAN:DESCription?

Description

Sets or queries the description.

Parameter

Name	Type	Range	Default
<name>	ASCII String	The label can contain English letters and numbers, as well as some symbols.	-

Remarks

N/A

Return Format

The query returns the description in ASCII strings.

Example

```
N/A
```


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3.10 IEEE488.2 Common Commands

The IEEE488.2 common commands are used to query the basic information of the instrument or executing basic operations. These commands usually start with "*", and the command keywords contain 3 characters and are related with status registers.

The standard event status register (SESR) and status byte register (SBR) record the event of a certain type happened during the use of the instrument. IEEE488.2 defines to record one specific type of event for each bit in the status register.

Table 3.77 Table of the Bit Definition of Standard Event Status Register

Bit No.	Bit Name	Decimal Value	Description
0	Operation Complete (OPC)	1	"Operation complete" indicates that all pending operations were completed following the execution of the command.
1	Not Used	2	-
2	Query Error (QYE)	4	The instrument tries to read the output buffer but it was empty. Or, a new command line was received before a previous query has been read. Or, both the input buffer and output buffer are full.
3	Device-Specific Error (DDE)	8	Indicates that an error has occurred that is neither a Command Error, a Query Error, nor an Execution Error. A Device-Specific Error is any executed device operation that did not properly complete due to some condition, such as self-check error, calibration error, or other device-specific errors.
4	Execution Error (E)	16	An execution error occurred.
5	Command Error (CME)	32	A command error (command syntax error) has occurred.
6	Not Used	64	-
7	Power On (PON)	128	Indicates that an off-to-on transition has occurred in the device's power supply since

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Bit No.	Bit Name	Decimal Value	Description
			last reading or the event register was cleared.

Table 3.78 Table of the Bit Definition of Status Byte Register

Bit No.	Bit Name	Decimal Value	Description
0	Not Used	1	-
1	Not Used	2	-
2	Error Queue	4	1 or multiple errors in the error queue
3	Questionable Data Summary	8	Sets 1 or multiple bits (must be the enabled bit) in the questionable data register.
4	Message Available (MAV)	16	Indicates the available data in the output buffer.
5	Standard Event Summary	32	Sets 1 or multiple bits (must be the enabled bit) in the standard event register.
6	Master Summary Status (MSS)	64	Sets 1 or multiple bits (must be the enabled bit) in the Status Byte Register and generate the service request.
7	Operation Status Register	128	Sets 1 or multiple bits (must be the enabled bit) in the Operation Status Register.

3.10.1 *IDN?

Syntax

`*IDN?`

Description

Queries the ID string of the instrument.

Parameter

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Remarks

Return Format

The query returns RIGOL TECHNOLOGIES,<model>,<serial number>,<software version>.

- **<model>:** indicates the model number of the instrument.
- **<serial number>:** indicates the serial number of the instrument.
- **<software version>:** indicates the software version of the instrument.

Example

3.10.2 *RST

Syntax

`*RST`

Description

Restores the instrument to its factory default settings.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
N/A
```

3.10.3 *CLS

Syntax

`*CLS`

Description

Clears all the event registers, and also clears the error queue.

Parameter

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Remarks

Return Format

Example

3.10.4 *ESE

Syntax

***ESE** <*maskargument*>

***ESE?**

Description

Sets or queries the enable register of the standard event register set.

Parameter

Name	Type	Range	Default
<maskargument>	Integer	0 to 255	0

Remarks

For the definitions of the bits in the standard event register, refer to *Table 3.77 Table of the Bit Definition of Standard Event Status Register*. The value of <maskargument> is the sum of the decimal values of all bits set in the standard event register. For example, to enable Bit 2 (4 in decimal), Bit 3 (8 in decimal), and Bit 7 (128 in decimal), set the <maskargument> to 140 (4+8+128).

Return Format

The query returns an integer. The integer equals to the decimal-weighted sum of all the bits set in the register.

Example

```
*ESE 16 /*Enables Bit 4 (16 in decimal) in the register.*/
*ESE? /*The query returns the enable value of the register 16.*/
```

3.10.5 *ESR?

Syntax

***ESR?**

Description

Queries and clears the event register of the standard event status register.

Parameter

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Remarks

Bit 1 and Bit 6 in the standard event status register (*Table 3.77 Table of the Bit Definition of Standard Event Status Register*) are not used and are always treated as 0; therefore, the range of the returned value is a decimal number corresponding to a binary number X0XXXX0X (X is 1 or 0).

Return Format

The query returns an integer. The integer equals to the binary-weighted sum of all the bits set in the register.

Example

3.10.6 *OPC

Syntax

```
*OPC
```

```
*OPC?
```

Description

The *OPC command sets bit 0 (Operation Complete, OPC) in the standard event register to 1 after the current operation is finished.

The *OPC? command queries whether the current operation is finished.

Parameter

N/A

Remarks

For the definitions of the bits in the standard event register, refer to *Table 3.77 Table of the Bit Definition of Standard Event Status Register*.

Return Format

The query returns 1 after the current operation is finished; otherwise, the query returns 0.

Example

```
N/A
```

3.10.7 *RCL

Syntax

```
*RCL
```

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Description

Recalls instrument settings from the specified non-volatile memory. The previous saved settings through the *SAV command will be overwritten.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
N/A
```

3.10.8 *SAV

Syntax

***SAV** <*value*>

Description

Saves the current instrument state to the selected register.

Parameter

Name	Type	Range	Default
<value>	Integer	0 to 49	0

Remarks

N/A

Return Format

N/A

Example

```
*SAV 1          /*Saves the current instrument state to Register 1.*/
```

3.10.9 *SRE

Syntax

***SRE** <*maskargument*>

***SRE?**

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Description

Sets or queries the enable register of the status byte register set.

Parameter

Name	Type	Range	Default
<maskargument>	Integer	0 to 255	0

Remarks

For the definitions of the bits in the status byte register, refer to *Table 3.78 Table of the Bit Definition of Status Byte Register*. The value of <maskargument> is the sum of the decimal values of all bits set in the status byte register. For example, to enable Bit 2 (4 in decimal), Bit 3 (8 in decimal), and Bit 7 (128 in decimal), set the <maskargument> to 140 (4+8+128).

Return Format

The query returns an integer. The integer equals to the decimal-weighted sum of all the bits set in the register.

Example

```
*SRE 16 /*Enables Bit 4 (16 in decimal) in the register.*/
*SRE? /*The query returns the enable value of the register 16.*/
```

3.10.10 *STB?

Syntax

***STB?**

Description

Queries the event register for the status byte register. After executing the command, the value in the status byte register is cleared.

Parameter

Remarks

Bit 0 and Bit 1 in the status byte register (*Table 3.78 Table of the Bit Definition of Status Byte Register*) are not used and are always treated as 0; therefore, the range of the returned value is a decimal number corresponding to a binary number XXXXXX00 (X is 1 or 0).

Return Format

The query returns an integer. The integer equals to the decimal-weighted sum of all the bits set in the register.

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Example

3.10.11 *WAI

Syntax

***WAI**

Description

Waits for all the pending operations to complete before executing any additional commands.

Parameter

N/A

Remarks

This operation command does not have any functions, only to be compatible with other devices.

Return Format

N/A

Example

```
N/A
```

3.10.12 *TST?

Syntax

***TST?**

Description

Performs a self-test and returns the self-test result.

Parameter

N/A

Remarks

This command performs a self-test. If the test fails, one or multiple error messages will be displayed.

Return Format

The query returns 0 or 1.

- **0:** passed the test.

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- **1:** one or multiple tests failed.

Example

```
N/A
```

3.10.13 :GPIB:PARSe:END

Syntax

:GPIB:PARSe:END

Description

The GPIB module command. This instruction set sends the "Parse End" command to the GPIB module. If this command is not sent, RIGOL's USB-GPIB adapter fails to work. You will receive no return value after sending a command.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
N/A
```

3.11 :MMEMory Commands

3.11.1 :MMEMory:LOAD:STATe

Syntax

:MMEMory:LOAD:STATe <*file_name*>

Description

Loads the specified state file suffixed with *.sta from the default path.

Parameter

Name	Type	Range	Default
<file_name>	ASCII String	Name of the file to be loaded	-

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Remarks

- The default path is "/adm/state".
- This command is valid when the specified file already exists in the default path.

Return Format

N/A

Example

```
:MMEMory:LOAD:STATe mydata.sta /*Loads the file named "mydata.sta"
from the default path.*/
```

3.11.2 :MMEMory:STORe:SCReen

Syntax

:MMEMory:STORe:SCReen <*file_name*>

Description

Saves the current screen image as a file with the specified file name to the default path.

Parameter

Name	Type	Range	Default
<file_name>	ASCII String	-	-

Remarks

- The default path is "/adm/screen".
- If the specified file already exists, overwrite it.
- The file can be saved in "*.png", "*.bmp", or "*.jpg" format. If no suffix is added to the filename, by default, the file is saved with the suffix that you choose for the format in the screen saving user interface.

Return Format

N/A

Example

```
:MMEMory:STORe:SCReen myData.png  /*Saves the current screen image
as a file named myData.png to the /adm/screen folder.*/
```


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3.11.3 :MMEMory:STORe:SCReen:DATA?

Syntax

:MMEMory:STORe:SCReen:DATA?

Description

Saves the screen data.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
N/A
```

3.11.4 :MMEMory:STORe:STATe

Syntax

:MMEMory:STORe:STATe <*file_name*>

Description

Saves the current instrument state as a file with the specified file name suffixed with "*.sta" to the default path.

Parameter

Name	Type	Range	Default
<file_name>	ASCII String	-	-

Remarks

- The default path is "/adm/state".
- If the specified file already exists, overwrite it.

Return Format

N/A

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Example

```
:MMEMory:STORe:STATe mydata  /*Saves the current instrument state
as a file named mydata.sta to the /adm/state folder.*/
```

3.11.5 :MMEMory:STORe:TRACe:DATA

Syntax

:MMEMory:LOAD:TRACe:DATA <*label*> <*file_name*>

Description

Saves the trace measurement data with a specified filename suffixed with ".csv" to the default path (/"mode name"/measdata).

Parameter

Name	Type	Range	Default
<label>	Discrete	TRACE1|TRACE2|TRACE3| TRACE4|TRACE5|TRACE6	-
<file_name>	ASCII String	-	-

Remarks

This operation fails if the file with the specified filename does not exist.

TRACE1-TRACE6 indicate RFSPectrum, AFSPectrum, DEMod, DAVerage, DMAXimum, and DMINimum respectively.

Return Format

N/A

Example

```
:MMEMory:STORe:TRACe:DATA TRACE1,mydata /*Saves the RFSPectrum
measurement data as a file named mydata.csv to the /adm/measdata
folder.*/
```

3.11.6 :MMEMory:STORe:IMG:PNG

Syntax

:MMEMory:STORe:IMG:PNG <*path*>

Description

Saves the screen image to the specified path.

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Parameter

Name	Type	Range	Default
<path>	ASCII String	-	-

Remarks

N/A

Return Format

N/A

Example

```
N/A
```

3.11.7 :MMEMory:STORe:RESults

Syntax

:MMEMory:STORe:RESults <*file_name*>

Description

Saves the current measurement results with the specified filename suffixed with ".csv" by default (you do not have to add the suffix manually) to the default path (/"mode name"/measdata).

Parameter

Name	Type	Range	Default
<file_name>	ASCII String	-	-

Remarks

If the specified file already exists, overwrite it.

Return Format

N/A

Example

```
:MMEMory:STORe:RESults data /*Saves the current measurement results
as a file named "data" to the /adm/measdata folder.*/
```

3.11.8 :MMEMory:USER:STORe

Syntax

:MMEMory:USER:STORe <*user*>

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:MMEMory:USER:STORe?

Description

Selects and saves the specified preset settings.

Queries the selected preset.

Parameter

Name	Type	Range	Default
<user>	Discrete	DEF|USER1|USER2|USER3|USER4|USER5|USER6	DEF

Remarks

N/A

Return Format

N/A

Example

```
:MMEMory:USER:STORe USER1 /*Selects USER1 and saves its preset settings.*/
:MMEMory:USER:STORe? /*The query returns USER1.*/
```

3.12 :SENSe Commands

3.12.1 [:SENSe]:FREQuency:CENTer

Syntax

[:SENSe]:FREQuency:CENTer <*freq*>

[:SENSe]:FREQuency:CENTer?

Description

Sets the center frequency in the RF Spectrum view.

Queries the center frequency in the RF Spectrum view.

Parameter

Name	Type	Range	Default
<freq>	Real	2.5 kHz to F_{max}	1 GHz

Remarks

The maximum measurement frequency Fmax is determined by the instrument model.

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Return Format

The query returns the center frequency in the RF Spectrum view in real number. The unit is Hz.

Example

```
:FREQuency:CENTer 50000000 /*Sets the center frequency in the RF
Spectrum view to 50 MHz.*/
:FREQuency:CENTer? /*The query returns 50000000.000000.*/
```

3.12.2 [:SENSe]:FREQuency:CENTer:STEP[:INCRement]

Syntax

[:SENSe]:FREQuency:CENTer:STEP[:INCRement] <*freq*>

[:SENSe]:FREQuency:CENTer:STEP[:INCRement]?

Description

Sets the CF step.

Queries the CF step.

Parameter

Name	Type	Range	Default
<freq>	Real	-Fmax to Fmax	Fmax/10

Remarks

The maximum measurement frequency Fmax is determined by the instrument model.

Return Format

The query returns the center frequency in the RF Spectrum view in real number. The unit is Hz.

Example

```
:SENSe:FREQuency:CENTer:STEP:INCRement 100000 /*Sets the CF step to
100 kHz.*/
:SENSe:FREQuency:CENTer:STEP:INCRement? /*The query returns
100000.000000.*/
```

3.12.3 [:SENSe]:FREQuency:CENTer:STEP:AUTO

Syntax

[:SENSe]:FREQuency:CENTer:STEP:AUTO <*bool*>

[:SENSe]:FREQuency:CENTer:STEP:AUTO?

Description

Sets the CF step mode to Manual or Auto.

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Queries the CF step mode.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	ON|1

Remarks

0: sets the CF step mode to Manual.

1: sets the CF step mode to Auto.

Return Format

The query returns 1 or 0.

Example

```
:SENSe:FREQuency:CENTer:STEP:AUTO ON /*Sets the CF step mode to
Auto.*/
:SENSe:FREQuency:CENTer:STEP:AUTO? /*The query returns 1.*/
```

3.12.4 [:SENSe]:POWer[:RF]:ATTenuation

Syntax

[:SENSe]:POWer[:RF]:ATTenuation <*real*>

[:SENSe]:POWer[:RF]:ATTenuation?

Description

Sets the attenuation of the RF front-end attenuator.

Queries the attenuation of the RF front-end attenuator.

Parameter

Name	Type	Range	Default
<real>	Integer	0 dB to 40 dB	10 dB

Return Format

The query returns the attenuation in integer. The unit is dB.

Example

```
:SENSe:POWer:RF:ATTenuation 20 /*Sets the attenuation to 20 dB*/
:SENSe:POWer:RF:ATTenuation?  /*The query returns 20.*/
```


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3.12.5 [:SENSe]:POWer[:RF]:ATTenuation:AUTO

Syntax

[:SENSe]:POWer[:RF]:ATTenuation:AUTO <*bool*>

[:SENSe]:POWer[:RF]:ATTenuation:AUTO?

Description

Sets the attenuation mode to Manual or Auto.

Queries the attenuation mode.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	ON|1

Remarks

0: sets the attenuation mode to Manual.

1: sets the attenuation mode to Auto.

Return Format

The query returns 1 or 0.

Example

```
:SENSe:POWer:RF:ATTenuation:AUTO ON /*Sets the attenuation mode to
Auto.*/
:SENSe:POWer:RF:ATTenuation:AUTO? /*The query returns 1.*/
```

3.12.6 [:SENSe]:POWer[:RF]:GAIN[:STATe]

Syntax

[:SENSe]:POWer[:RF]:GAIN[:STATe] <*bool*>

[:SENSe]:POWer[:RF]:GAIN[:STATe]?

Description

Enables or disables the preamplifier (PA).

Queries the on/off status of the preamplifier (PA).

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	ON|1

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Return Format

The query returns 1 or 0.

Example

```
:SENSe:POWer:RF:GAIN:STATe ON /*Enables the preamplifier (PA).*/
:SENSe:POWer:RF:GAIN:STATe? /*The query returns 1.*/
```

3.12.7 [:SENSe]:POWer[:RF]:MIXer:RANGe[:UPPer]

Syntax

[:SENSe]:POWer[:RF]:MIXer:RANGe[:UPPer] <*ampl*>

[:SENSe]:POWer[:RF]:MIXer:RANGe[:UPPer]?

Description

Sets the maximum input level of the mixer.

Queries the maximum input level of the mixer.

Parameter

Name	Type	Range	Default
<ampl>	Real	-40 dBm to -10 dBm	-10 dBm

Remarks

N/A

Return Format

The query returns the maximum input level of the mixer in scientific notation. The unit is dBm.

Example

```
:SENSe:POWer:RF:MIXer:RANGe:UPPer -20 /*Sets the maximum input
level of the mixer to -20 dBm.*/
:SENSe:POWer:RF:MIXer:RANGe:UPPer? /*The query returns -2.0E+01.*/
```

3.12.8 [:SENSe]:AM:AFSPectrum:BANDwidth

Syntax

[:SENSe]:AM:AFSPectrum:BANDwidth <*bandwidth*>

[:SENSe]:AM:AFSPectrum:BANDwidth?

Description

Sets the AF RBW value in the AF Spectrum view for AM demodulation type.

Queries the AF RBW value in the AF Spectrum view for AM demodulation type.

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Parameter

Name	Type	Range	Default
<bandwidth>	Real	Related to the span	96 Hz

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the AF resolution bandwidth in real number. Its unit is Hz.

Example

```
:AM:AFSPectrum:BANDwidth 100000 /*Sets the AF RBW value in the AF
Spectrum view for AM demodulation type to 12 kHz.*/
:AM:AFSPectrum:BANDwidth? /*The query returns 12000.000000.*/
```

3.12.9 [:SENSe]:AM:AFSPectrum:BANDwidth:AUTO

Syntax

[:SENSe]:AM:AFSPectrum:BANDwidth:AUTO <*bool*>

[:SENSe]:AM:AFSPectrum:BANDwidth:AUTO?

Description

Sets the AF RBW Mode in the AF Spectrum view for AM demodulation type.

Queries the AF RBW Mode in the AF Spectrum view for AM demodulation type.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	ON|1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns 1 or 0.

Example

```
:AM:AFSPectrum:BANDwidth:AUTO ON /*Sets the AF RBW Mode in the AF
Spectrum view for AM demodulation type to Auto.*/
:AM:AFSPectrum:BANDwidth:AUTO? /*The query returns 1.*/
```

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3.12.10 [:SENSe]:AM:AFSPectrum:FREQuency:STARt

Syntax

[:SENSe]:AM:AFSPectrum:FREQuency:STARt <*freq*>

[:SENSe]:AM:AFSPectrum:FREQuency:STARt?

Description

Sets the AF start frequency in the AF Spectrum view for the AM demodulation type.

Queries the AF start frequency in the AF Spectrum view for the AM demodulation type.

Parameter

Name	Type	Range	Default
<freq>	Real	0 to (40 MHz - 10 Hz)	0 Hz

Remarks

If set AF start frequency is the greater than the current AF stop frequency, then the AF stop frequency will be modified to (set AF start frequency + 10 Hz).

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the AF start frequency in real number. The unit is Hz.

Example

```
:AM:AFSPectrum:FREQuency:STARt 10000000 /*Sets the AF start
frequency in the AF Spectrum view for AM demodulation type to 10
MHz.*/
:AM:AFSPectrum:FREQuency:STARt? /*The query returns
10000000.000000.*/
```

3.12.11 [:SENSe]:AM:AFSPectrum:FREQuency:STOP

Syntax

[:SENSe]:AM:AFSPectrum:FREQuency:STOP <*freq*>

[:SENSe]:AM:AFSPectrum:FREQuency:STOP?

Description

Sets the AF stop frequency in the AF Spectrum view for the AM demodulation type.

Queries the AF stop frequency in the AF Spectrum view for the AM demodulation type.

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Parameter

Name	Type	Range	Default
<freq>	Real	10 Hz to 40 MHz	10 kHz

Remarks

If the set AF stop frequency is the smaller than the current AF start frequency, then the start frequency will be modified to (AF stop frequency - 10 Hz).

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the AF stop frequency in real number. The unit is Hz.

Example

```
:AM:AFSPectrum:FREQuency:STOP 10000000 /*Sets the AF stop frequency
in the AF Spectrum view for AM demodulation type to 10 MHz.*/
:AM:AFSPectrum:FREQuency:STOP? /*The query returns
10000000.000000.*/
```

3.12.12 [:SENSe]:AM:AVERage:COUNt

Syntax

[:SENSe]:AM:AVERage:COUNt <*count*>

[:SENSe]:AM:AVERage:COUNt?

Description

Sets the average count of the current measurement for the AM demodulation type.

Queries the average count of the current measurement for the AM demodulation type.

Parameter

Name	Type	Range	Default
<count>	Integer	1 to 10000	10

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the average count in integer.

Example

```
:AM:AVERage:COUNt 10 /*Sets the average count of the current
measurement for the AM demodulation type to 10.*/
:AM:AVERage:COUNt? /*The query returns 10.*/
```

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3.12.13 [:SENSe]:AM:AVERage[:STATe]

Syntax

[:SENSe]:AM:AVERage[:STATe] <*bool*>

[:SENSe]:AM:AVERage[:STATe]?

Description

Enables or disables the Average state for the AM demodulation type.

Queries the Average state for the AM demodulation type.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	0|OFF

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns 1 or 0.

Example

```
:AM:AVERage ON /*Enables the Average state.*/
:AM:AVERage? /*The query returns 1.*/
```

3.12.14 [:SENSe]:AM:BANDwidth|BWIDth:CHANnel

Syntax

[:SENSe]:AM:BANDwidth|BWIDth:CHANnel <*freq*>

[:SENSe]:AM:BANDwidth|BWIDth:CHANnel?

Description

Sets the channel bandwidth for the AM demodulation type.

Queries the channel bandwidth for the AM demodulation type.

Parameter

Name	Type	Range	Default
<freq>	Real	Refer to *Remarks*	25 kHz

Remarks

- The range of the <freq> parameter is from 40 Hz to 80 MHz.

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- The channel bandwidth shall be smaller than or equal to the span. If the set channel bandwidth is greater than the current span, the span will be modified to the channel bandwidth. To set or query the current span in the RF Spectrum view for the AM demodulation type, run the *[:SENSe]:AM:FREQuency:SPAN* command.
- To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the channel bandwidth in real number. Its unit is Hz.

Example

```
:AM:BANDwidth|BWIDth:CHANnel 100000 /*Sets the channel bandwidth in
the RF Spectrum view for AM demodulation type to 100 kHz.*/
:AM:BANDwidth|BWIDth:CHANnel? /*The query returns 100000.000000.*/
```

3.12.15 [:SENSe]:AM:FREQuency:SPAN

Syntax

[:SENSe]:AM:FREQuency:SPAN <*span*>

[:SENSe]:AM:FREQuency:SPAN?

Description

Sets the span in the RF Spectrum view for AM demodulation type.

Queries the span in the RF Spectrum view for AM demodulation type.

Parameter

Name	Type	Range	Default
	Real	Refer to *Remarks*	75 kHz

Remarks

- The range of the parameter is from 5 kHz to 80 MHz.
- The span shall be equal to or greater than the channel bandwidth. If the set span is smaller than the current bandwidth, the current channel bandwidth will be modified to the span accordingly. To set or query the channel bandwidth in the AM demodulation, run the *[:SENSe]:AM:BANDwidth|BWIDth:CHANnel* command.

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- To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the span in the RF Spectrum view in real number. The unit is Hz.

Example

```
:AM:FREQuency:SPAN 100000 /*Sets the span in the RF Spectrum view
for AM demodulation type to 100 kHz.*/
:AM:FREQuency:SPAN? /*The query returns 100000.000000.*/
```

3.12.16 [:SENSe]:AM:SWEep:POINts

Syntax

[:SENSe]:AM:SWEep:POINts <*integer*>

[:SENSe]:AM:SWEep:POINts

Description

Sets the number of sweep points in AM demodulation.

Queries the number of sweep points in AM demodulation.

Parameter

Name	Type	Range	Default
<integer>	Integer	101 to 20001	2001

Return Format

The query returns the number of sweep points in integer.

Example

```
:SENSe:AM:SWEep:POINts 650 /*Sets the number of sweep points in AM
demodulation to 650.*/
:SENSe:AM:SWEep:POINts? /*The query returns 650.*/
```

3.12.17 [:SENSe]:FM:AFSPectrum:BANDwidth

Syntax

[:SENSe]:FM:AFSPectrum:BANDwidth <*bandwidth*>

[:SENSe]:FM:AFSPectrum:BANDwidth?

Description

Sets the AF RBW value in the AF Spectrum view for FM demodulation type.

Queries the AF RBW value in the AF Spectrum view for FM demodulation type.

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Parameter

Name	Type	Range	Default
<bandwidth>	Real	Related to the span	96 Hz

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the AF resolution bandwidth in real number. Its unit is Hz.

Example

```
:FM:AFSPectrum:BANDwidth 100000 /*Sets the AF RBW value in the AF
Spectrum view for FM demodulation type to 100 kHz.*/
FM:AFSPectrum:BANDwidth? /*The query returns 100000.000000.*/
```

3.12.18 [:SENSe]:FM:AFSPectrum:BANDwidth:AUTO

Syntax

[:SENSe]:FM:AFSPectrum:BANDwidth:AUTO <*bool*>

[:SENSe]:FM:AFSPectrum:BANDwidth:AUTO?

Description

Sets the AF RBW Mode in the AF Spectrum view for FM demodulation type.

Queries the AF RBW Mode in the AF Spectrum view for FM demodulation type.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	ON|1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns 1 or 0.

Example

```
:FM:AFSPectrum:BANDwidth:AUTO ON /*Sets the AF RBW Mode in the AF
Spectrum view for FM demodulation type to Auto.*/
:FM:AFSPectrum:BANDwidth:AUTO? /*The query returns 1.*/
```

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3.12.19 [:SENSe]:FM:AFSPectrum:FREQuency:STARt

Syntax

[:SENSe]:FM:AFSPectrum:FREQuency:STARt <*freq*>

[:SENSe]:FM:AFSPectrum:FREQuency:STARt?

Description

Sets the AF start frequency in the AF Spectrum view for the FM demodulation type.

Queries the AF start frequency in the AF Spectrum view for the FM demodulation type.

Parameter

Name	Type	Range	Default
<freq>	Real	0 to (40 MHz - 10 Hz)	0 Hz

Remarks

If set AF start frequency is the greater than the current AF stop frequency, then the AF stop frequency will be modified to (set AF start frequency + 10 Hz).

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the AF start frequency in real number. The unit is Hz.

Example

```
:FM:AFSPectrum:FREQuency:STARt 10000000 /*Sets the AF start
frequency in the AF Spectrum view for FM demodulation type to 10
MHz.*/
:FM:AFSPectrum:FREQuency:STARt? /*The query returns
10000000.000000.*/
```

3.12.20 [:SENSe]:FM:AFSPectrum:FREQuency:STOP

Syntax

[:SENSe]:FM:AFSPectrum:FREQuency:STOP <*freq*>

[:SENSe]:FM:AFSPectrum:FREQuency:STOP?

Description

Sets the AF stop frequency in the AF Spectrum view for the FM demodulation type.

Queries the AF stop frequency in the AF Spectrum view for the FM demodulation type.

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Parameter

Name	Type	Range	Default
<freq>	Real	10 Hz to 40 MHz	10 kHz

Remarks

If the set AF stop frequency is the smaller than the current AF start frequency, then the start frequency will be modified to (AF stop frequency - 10 Hz).

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the AF stop frequency in real number. The unit is Hz.

Example

```
:FM:AFSPectrum:FREQuency:STOP 10000000 /*Sets the AF stop frequency
in the AF Spectrum view for FM demodulation type to 10 MHz.*/
:FM:AFSPectrum:FREQuency:STOP? /*The query returns
10000000.000000.*/
```

3.12.21 [:SENSe]:FM:AVERage:COUNt

Syntax

[:SENSe]:FM:AVERage:COUNt <*integer*>

[:SENSe]:FM:AVERage:COUNt?

Description

Sets the average count of the current measurement for the FM demodulation type.

Queries the average count of the current measurement for the FM demodulation type.

Parameter

Name	Type	Range	Default
<count>	Integer	1 to 10000	10

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the average count in integer.

Example

```
:FM:AVERage:COUNt 10 /*Sets the average count of the current
measurement for the FM demodulation type.*/
:FM:AVERage:COUNt? /*The query returns 10.*/
```

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3.12.22 [:SENSe]:FM:AVERage[:STATe]

Syntax

[:SENSe]:FM:AVERage[:STATe] <*bool*>

[:SENSe]:FM:AVERage[:STATe]?

Description

Enables or disables the Average state for the FM demodulation type.

Queries the Average state for the FM demodulation type.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	0|OFF

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns 1 or 0.

Example

```
:FM:AVERage ON /*Enables the Average state.*/
:FM:AVERage? /*The query returns 1.*/
```

3.12.23 [:SENSe]:FM:BANDwidth|BWIDth:CHANnel

Syntax

[:SENSe]:FM:BANDwidth|BWIDth:CHANnel <*freq*>

[:SENSe]:FM:BANDwidth|BWIDth:CHANnel?

Description

Sets the channel bandwidth for the FM demodulation type.

Queries the channel bandwidth for the FM demodulation type.

Parameter

Name	Type	Range	Default
<freq>	Real	Refer to *Remarks*	25 kHz

Remarks

- The range of <freq> is from 40 Hz to 80 MHz.

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- The channel bandwidth shall be smaller than or equal to the span. If the set channel bandwidth is greater than the current span, the span will be modified to the channel bandwidth. To set or query the current span in the RF Spectrum view for the FM demodulation type, run the *[:SENSe]:FM:FREQuency:SPAN* command.
- To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the channel bandwidth in real number. Its unit is Hz.

Example

```
:FM:BANDwidth|BWIDth:CHANnel 100000 /*Sets the channel bandwidth in
the RF Spectrum view for FM demodulation type to 100 kHz.*/
:FM:BANDwidth|BWIDth:CHANnel? /*The query returns 100000.000000.*/
```

3.12.24 [:SENSe]:FM:FREQuency:SPAN

Syntax

[:SENSe]:FM:FREQuency:SPAN <*span*>

[:SENSe]:FM:FREQuency:SPAN?

Description

Sets the span in the RF Spectrum view for FM demodulation type.

Queries the span in the RF Spectrum view for FM demodulation type.

Parameter

Name	Type	Range	Default
	Real	Refer to *Remarks*	75 kHz

Remarks

- The range of the parameter is from 5 kHz to 80 MHz.
- The span shall be equal to or greater than the channel bandwidth. If the set span is smaller than the current bandwidth, the current channel bandwidth will be modified to the span accordingly. To set or query the channel bandwidth in the FM demodulation, run the *[:SENSe]:FM:BANDwidth|BWIDth:CHANnel* command.

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- To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the span in the RF Spectrum view in real number. The unit is Hz.

Example

```
:FM:FREQuency:SPAN 100000 /*Sets the span in the RF Spectrum view
for FM demodulation type to 100 kHz.*/
:FM:FREQuency:SPAN? /*The query returns 100000.000000.*/
```

3.12.25 [:SENSe]:FM:SWEep:POINts

Syntax

[:SENSe]:FM:SWEep:POINts <*integer*>

[:SENSe]:FM:SWEep:POINts

Description

Sets the number of sweep points in FM demodulation.

Queries the number of sweep points in FM demodulation.

Parameter

Name	Type	Range	Default
<integer>	Integer	101 to 20001	2001

Return Format

The query returns the number of sweep points in integer.

Example

```
:SENSe:FM:SWEep:POINts 650 /*Sets the number of sweep points in FM
demodulation to 650.*/
:SENSe:FM:SWEep:POINts? /*The query returns 650.*/
```

3.12.26 [:SENSe]:PM:AFSPectrum:BANDwidth

Syntax

[:SENSe]:PM:AFSPectrum:BANDwidth <*bandwidth*>

[:SENSe]:PM:AFSPectrum:BANDwidth?

Description

Sets the AF RBW value in the AF Spectrum view for PM demodulation type.

Queries the AF RBW value in the AF Spectrum view for PM demodulation type.

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Parameter

Name	Type	Range	Default
<bandwidth>	Real	Related to the span	96 Hz

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the AF resolution bandwidth in real number. Its unit is Hz.

Example

```
:PM:AFSPectrum:BANDwidth 100000 /*Sets the AF RBW value in the AF
Spectrum view for PM demodulation type to 100 kHz.*/
:PM:AFSPectrum:BANDwidth? /*The query returns 100000.000000.*/
```

3.12.27 [:SENSe]:PM:AFSPectrum:BANDwidth:AUTO

Syntax

[:SENSe]:PM:AFSPectrum:BANDwidth:AUTO <*bool*>

[:SENSe]:PM:AFSPectrum:BANDwidth:AUTO?

Description

Sets the AF RBW Mode in the AF Spectrum view for PM demodulation type.

Queries the AF RBW Mode in the AF Spectrum view for PM demodulation type.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	ON|1

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns 1 or 0.

Example

```
:PM:AFSPectrum:BANDwidth:AUTO ON /*Sets the AF RBW Mode in the AF
Spectrum view for PM demodulation type to Auto.*/
:PM:AFSPectrum:BANDwidth:AUTO? /*The query returns 1.*/
```

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3.12.28 [:SENSe]:PM:AFSPectrum:FREQuency:STARt

Syntax

[:SENSe]:PM:AFSPectrum:FREQuency:STARt <*freq*>

[:SENSe]:PM:AFSPectrum:FREQuency:STARt?

Description

Sets the AF start frequency in the AF Spectrum view for the PM demodulation type.

Queries the AF start frequency in the AF Spectrum view for the PM demodulation type.

Parameter

Name	Type	Range	Default
<freq>	Real	0 to (40 MHz - 10 Hz)	0 Hz

Remarks

If set AF start frequency is the greater than the current AF stop frequency, then the AF stop frequency will be modified to (set AF start frequency + 10 Hz).

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the AF start frequency in real number. The unit is Hz.

Example

```
:PM:AFSPectrum:FREQuency:STARt 10000000 /*Sets the AF start
frequency in the AF Spectrum view for PM demodulation type to 10
MHz.*/
:PM:AFSPectrum:FREQuency:STARt? /*The query returns
10000000.000000.*/
```

3.12.29 [:SENSe]:PM:AFSPectrum:FREQuency:STOP

Syntax

[:SENSe]:PM:AFSPectrum:FREQuency:STOP <*freq*>

[:SENSe]:PM:AFSPectrum:FREQuency:STOP?

Description

Sets the AF stop frequency in the AF Spectrum view for the PM demodulation type.

Queries the AF stop frequency in the AF Spectrum view for the PM demodulation type.

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Parameter

Name	Type	Range	Default
<freq>	Real	10 Hz to 40 MHz	10 kHz

Remarks

If the set AF stop frequency is the smaller than the current AF start frequency, then the start frequency will be modified to (AF stop frequency - 10 Hz).

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the AF stop frequency in real number. The unit is Hz.

Example

```
:PM:AFSPectrum:FREQuency:STOP 10000000 /*Sets the AF stop frequency
in the AF Spectrum view for PM demodulation type to 10 MHz.*/
:PM:AFSPectrum:FREQuency:STOP? /*The query returns
10000000.000000.*/
```

3.12.30 [:SENSe]:PM:AVERage:COUNt

Syntax

[:SENSe]:PM:AVERage:COUNt <*integer*>

[:SENSe]:PM:AVERage:COUNt?

Description

Sets the average count of the current measurement for the PM demodulation type.

Queries the average count of the current measurement for the PM demodulation type.

Parameter

Name	Type	Range	Default
<count>	Integer	1 to 10000	10

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the average count in integer.

Example

```
:PM:AVERage:COUNt 10 /*Sets the average count of the current
measurement for the PM demodulation type.*/
:PM:AVERage:COUNt? /*The query returns 10.*/
```

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3.12.31 [:SENSe]:PM:AVERage[:STATe]

Syntax

[:SENSe]:PM:AVERage[:STATe] <*bool*>

[:SENSe]:PM:AVERage[:STATe]?

Description

Enables or disables the Average state for the PM demodulation type.

Queries the Average state for the PM demodulation type.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	0|OFF

Remarks

To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns 1 or 0.

Example

```
:PM:AVERage ON /*Enables the Average state.*/
:PM:AVERage? /*The query returns 1.*/
```

3.12.32 [:SENSe]:PM:BANDwidth|BWIDth:CHANnel

Syntax

[:SENSe]:PM:BANDwidth|BWIDth:CHANnel <*freq*>

[:SENSe]:PM:BANDwidth|BWIDth:CHANnel?

Description

Sets the channel bandwidth for the PM demodulation type.

Queries the channel bandwidth for the PM demodulation type.

Parameter

Name	Type	Range	Default
<freq>	Real	Refer to *Remarks*	25 kHz

Remarks

- The range of <freq> is from 40 Hz to 80 MHz.

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- The channel bandwidth shall be smaller than or equal to the span. If the set channel bandwidth is greater than the current span, the span will be modified to the channel bandwidth. To set or query the current span in the RF Spectrum view for the PM demodulation type, run the *[:SENSe]:PM:FREQuency:SPAN* command.
- To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the channel bandwidth in real number. Its unit is Hz.

Example

```
:PM:BANDwidth|BWIDth:CHANnel 100000 /*Sets the channel bandwidth in
the RF Spectrum view for PM demodulation type to 100 kHz.*/
:PM:BANDwidth|BWIDth:CHANnel? /*The query returns 100000.000000.*/
```

3.12.33 [:SENSe]:PM:FREQuency:SPAN

Syntax

[:SENSe]:PM:FREQuency:SPAN <*span*>

[:SENSe]:PM:FREQuency:SPAN?

Description

Sets the span in the RF Spectrum view for PM demodulation type.

Queries the span in the RF Spectrum view for PM demodulation type.

Parameter

Name	Type	Range	Default
	Real	Refer to *Remarks*	75 kHz

Remarks

- The range of the parameter is from 5 kHz to 80 MHz.
- The span shall be equal to or greater than the channel bandwidth. If the set span is smaller than the current bandwidth, the current channel bandwidth will be modified to the span accordingly. To set or query the channel bandwidth in the PM demodulation, run the *[:SENSe]:PM:BANDwidth|BWIDth:CHANnel* command.

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- To set or query the type of the analog demodulation, run the *:CONFigure?* command.

Return Format

The query returns the span in the RF Spectrum view in real number. The unit is Hz.

Example

```
:PM:FREQuency:SPAN 100000 /*Sets the span in the RF Spectrum view
for PM demodulation type to 100 kHz.*/
:PM:FREQuency:SPAN? /*The query returns 100000.000000.*/
```

3.12.34 [:SENSe]:PM:SWEep:POINts

Syntax

[:SENSe]:PM:SWEep:POINts <*integer*>

[:SENSe]:PM:SWEep:POINts

Description

Sets the number of sweep points in PM demodulation.

Queries the number of sweep points in PM demodulation.

Parameter

Name	Type	Range	Default
<integer>	Integer	101 to 20001	2001

Return Format

The query returns the number of sweep points in integer.

Example

```
:SENSe:PM:SWEep:POINts 650 /*Sets the number of sweep points in PM
demodulation to 650.*/
:SENSe:PM:SWEep:POINts? /*The query returns 650.*/
```

3.12.35 [:SENSe]:DEMod:DWSWeep:TIME

Syntax

[:SENSe]:DEMod:DWSWeep:TIME <*time*>

[:SENSe]:DEMod:DWSWeep:TIME?

Description

Sets the demodulation waveform time of the analyzer in the Demod Waveform view.

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Queries the demodulation waveform time of the analyzer in the Demod Waveform view.

Parameter

Name	Type	Range	Default
<time>	Real	100 ns to 2 s	2 ms

Return Format

The query returns the demodulation waveform time of the analyzer in the Demod Waveform view in scientific notation. The default unit is s.

Example

```
:SENSe:DEMod:DWSWeep:TIME 0.139 /*Sets the demodulation waveform
time of the analyzer in the Demod Waveform view to 139 ms*/
:SENSe:DEMod:DWSWeep:TIME? /*The query returns
+1.38996445312500E-01.*/
```

3.12.36 [:SENSe]:CORRection:IMPedance[:INPut][:MAGNitude]

Syntax

[:SENSe]:CORRection:IMPedance[:INPut][:MAGNitude] <*enum*>

[:SENSe]:CORRection:IMPedance[:INPut][:MAGNitude]?

Description

Sets the input impedance. Its unit is Ω.

Queries the input impedance.

Parameter

Name	Type	Range	Default
<enum>	Discrete	50|75	50

Remarks

If the output impedance of the system under test is 75 Ω, you should use a 75 Ω to 50 Ω adapter (option) supplied by **RIGOL** to connect the analyzer with the system under test, and then set the input impedance to 75 Ω.

Return Format

The query returns 50 or 75.

Example

```
:SENSe:CORRection:IMPedance:INPut:MAGNitude 75 /*Sets the input
impedance to 75 Ω.*/
:SENSe:CORRection:IMPedance:INPut:MAGNitude? /*The query returns
75.*/
```

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3.12.37 [:SENSe]:CORRection:SA[:RF]:GAIN

Syntax

[:SENSe]:CORRection:SA[:RF]:GAIN <*ampl*>

[:SENSe]:CORRection:SA[:RF]:GAIN?

Description

Sets the external gain.

Queries the external gain.

Parameter

Name	Type	Range	Default
<ampl>	Real	-120 dB to 120 dB	0 dB

Return Format

The query returns the external gain value in scientific notation. The unit is dB.

Example

```
:SENSe:CORRection:SA:RF:GAIN 3 /*Sets the external gain value to 3
dB.*/
:SENSe:CORRection:SA:RF:GAIN?            /*The query returns 3.0E
+00.*/
```

3.13 :SYSTem Commands

3.13.1 :SYSTem:BEEPer

Syntax

:SYSTem:BEEPer <*bool*>

:SYSTem:BEEPer?

Description

Enables or disables the beeper.

Queries the on/off status of the beeper.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	OFF|0

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Remarks

N/A

Return Format

The query returns 0 or 1.

Example

```
:SYSTem:BEEPer ON or :SYSTem:BEEPer 1 /*Enables the beeper.*/
:SYSTem:BEEPer? /*The query returns 1.*/
```

3.13.2 :SYSTem:DATE

Syntax

:SYSTem:DATE <*year*> <*month*> <*day*>

:SYSTem:DATE?

Description

Sets the system date of the instrument.

Queries the system date of the instrument.

Parameter

Name	Type	Range	Default
<year>	ASCII String	2000 to 2099	-
<month>	ASCII String	01 to 12	-
<day>	ASCII String	01 to 31	-

Remarks

N/A

Return Format

The query returns the current system date in the format of "YYYY-MM-DD".

Example

```
:SYSTem:DATE 2017,11,16  /*Sets the system date to */
Nov. 16th, 2017.*/
:SYSTem:DATE?   /*The query returns 2017-11-16.*/
```

3.13.3 :SYSTem:TIME

Syntax

:SYSTem:TIME <*hour*> <*minute*> <*second*>

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:SYSTem:TIME?

Description

Sets the system time of the instrument.

Queries the system time of the instrument.

Parameter

Name	Type	Range	Default
<hour>	ASCII String	00 to 23	-
<minute>	ASCII String	00 to 59	-
<second>	ASCII String	00 to 59	-

Remarks

N/A

Return Format

The query returns the current system time in the format of "HH:MM:SS".

Example

```
:SYSTem:TIME 15,10,30  /*Sets the system time to */
15:10:30.*/
:SYSTem:TIME?   /*The query returns 15:10:30.*/
```

3.13.4 :SYSTem:STIME

Syntax

:SYSTem:STIME <*bool*>

:SYSTem:STIME?

Description

Sets whether to display the system date and time.

Queries whether to display the system date and time.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	OFF|0

Remarks

N/A

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Return Format

The query returns 0 or 1.

Example

```
:SYSTem:STIME ON or :SYSTem:STIME 1 /*Sets to display the system
date.*/
:SYSTem:STIME?   /*The query returns 1.*/
```

3.13.5 :SYSTem:LANGuage

Syntax

:SYSTem:LANGuage <*lan*>

:SYSTem:LANGuage?

Description

Sets the language of the instrument.

Queries the language of the instrument.

Parameter

Name	Type	Range	Default
<lan>	Discrete	SCHinese|TCHinese|KORean| JAPanese|ENGLish|GERMan| PORTuguese|POLish|FRENch| RUSSian|SPAN|THAI|INDonesian	ENGLish

Remarks

- SCHinese: Simplified Chinese.
- TCHinese: Traditional Chinese.
- KORean: Korean.
- JAPanese: Japanese.
- ENGLish: English.
- GERMan: German.
- PORTuguese: Portuguese.
- POLish: Polish.
- FRENch: French.
- RUSSian: Russian.

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- SPAN: Spanish.
- THAI: Thai.
- INDonesian: Indonesian.

Return Format

The query returns SCH, TCH, KOR, JAP, ENGL, GERM, PORT, POL, FREN, RUSS, SPAN, THAI, or IND.

Example

```
:SYSTem:LANGuage ENGLish  /*Sets the system language to English.*/
:SYSTem:LANGuage?  /*The query returns ENGL.*/
```

3.13.6 :SYSTem:PON

Syntax

:SYSTem:PON <*power_on*>

:SYSTem:PON?

Description

Selects the setting type the instrument recalls at power-on.

Queries what setting type the instrument recalls at power-on.

Parameter

Name	Type	Range	Default
<power_on>	Discrete	DEFault|LATest	DEFault

Remarks

- DEFault: indicates preset settings, including factory mode and 6 user-defined settings.
- LATest: last settings.

Return Format

The query returns DEF or LAT.

Example

```
:SYSTem:PON LAT  /*Sets the instrument to recall last settings at
next power-on.*/
:SYSTem:PON?  /*The query returns LAT.*/
```


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3.13.7 :SYSTem:PSTatus

Syntax

:SYSTem:PSTatus <*status*>

:SYSTem:PSTatus?

Description

Sets the power switch to be on or off.

Queries the status of power switch.

Parameter

Name	Type	Range	Default
<status>	Discrete	DEFault|OPEN	DEFault

Remarks

- DEFault: switch off.
- OPEN: switch on.

Return Format

The query returns DEF or OPEN.

Example

```
:SYSTem:PSTatus OFF 或 :SYSTem:PSTatus 0  /*Sets the power switch
to be on.*/
:SYSTem:PSTatus?  /*The query returns OPEN.*/
```

3.13.8 :SYSTem:PRESet

Syntax

:SYSTem:PRESet

Description

Resets the system to power on.

Parameter

N/A

Remarks

N/A

Return Format

N/A

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Example

```
N/A
```

3.13.9 :SYSTem:PWRD

Syntax

```
:SYSTem:PWRD
```

Description

Sets the system to power off.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
N/A
```

3.13.10 :SYSTem:VERSion?

Syntax

```
:SYSTem:VERSion?
```

Description

Queries the version number of the SCPI used by the system.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
N/A
```


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3.13.11 :SYSTem:LOCKed

Syntax

:SYSTem:LOCKed <*bool*>

:SYSTem:LOCKed?

Description

Enables or disables the touch screen operation.

Queries the on/off status of the touch screen operation.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	OFF|0

Remarks

N/A

Return Format

The query returns 0 or 1.

Example

```
:SYSTem:LOCKed ON or :SYSTem:LOCKed 1 /*Disables the touch screen
operation.*/
:SYSTem:LOCKed? /*The query returns 1.*/
```

3.13.12 :SYSTem:GPIB

Syntax

:SYSTem:GPIB <*adr*>

:SYSTem:GPIB?

Description

Sets or queries the GPIB address.

Parameter

Name	Type	Range	Default
<adr>	Integer	1 to 30	1

Remarks

N/A

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Return Format

The query returns an integer ranging from 1 to 30.

Example

```
:SYSTem:GPIB 2  /*Sets the GPIB address to 2.*/
:SYSTem:GPIB? /*The query returns 2.*/
```

3.13.13 :SYSTem:OPTion:INSTall

Syntax

:SYSTem:OPTion:INSTall <*option info*>@<*license info*>

Description

Installs and activates the specified option.

Parameter

Name	Type	Range	Default
<*option info*>	ASCII String	-	-
<*license info*>	ASCII String	-	-

Remarks

- <*option info*> indicates the Order No.
- <*license info*> indicates the option serial number.

Return Format

The query returns the trace data and measurement results of AM demodulation in strings.

Example

```
:SYSTem:OPTion:INSTall RSA6000-
ADM@8AD12B8EBC5DF492D1D4289B7CBA5B6150BF6F
5D752D645C36D74530B05F39B49C461B23A50D6C94A34E06782AC4380070B0D1A86B
A84E02768391FFD70C2103
/*Installs the option RSA6000-ADM.*/
```

3.13.14 :SYSTem:OPTion:STATe?

Syntax

:SYSTem:OPTion:STATe? *option name*

Description

Queries whether an option is activated or not.

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Parameter

Name	Type	Range	Default
<option name>	Discrete	BND|PA|P08|P14|P26|B200|RB200|EMI|T08|ADM|AWK|VSA|UBW	-

Remarks

N/A

Return Format

The query returns 0 (not activated) or 1 (activated).

Example

```
:SYSTem:OPTion:STATe? RSA6000-ADM  /*Queries whether the RSA6000-ADM option is activated.*/
```

3.13.15 :SYSTem:OPTion:UNINstall

Syntax

`:SYSTem:OPTion:UNINstall`

Description

Uninstalls all the official options.

Parameter

N/A

Remarks

N/A

Return Format

N/A

Example

```
N/A
```

3.13.16 :SYSTem:OPTions?

Syntax

`:SYSTem:OPTions?`

Description

Queries the option status of the spectrum analyzer, including option serial No., order No., option type, and active state.

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Parameter

N/A

Remarks

N/A

Return Format

The query returns the option status of the spectrum analyzer in strings, such as option serial No., order No., option type, and active state.

Example

```
:SYSTem:OPTions? /*The query returns No. |Option |Active 1|RSA6000-P08|Y 2|RSA6000-P14|Y 3|RSA6000-P26|Y 4|RSA6000-B200|Y 5|RSA6000-RB200|Y 6|RSA6000-T08|Y 7|RSA6000-ADM|Y 8|RSA6000-EMI|Y 9|RSA6000-AMK|Y 10|RSA6000-VSA|Y 11|RSA6000-UBW|Y*/
```

3.14 :TRIGger Commands

3.14.1 :TRIGger[:SEQuence]:SOURce

Syntax

:TRIGger[:SEQuence]:SOURce <*type*>

:TRIGger[:SEQuence]:SOURce?

Description

Sets the trigger source.

Queries the trigger source.

Parameter

Name	Type	Range	Default
<type>	Discrete	IMMediate|EXTernal1|POWer	IMMediate

Remarks

- IMMediate: indicates the free-run trigger.
- EXTernal1: indicates the external trigger.
- POWer: indicates the IF power trigger.

Return Format

The query returns IMM, EXT1, or POW.

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Example

```
:TRIGger:SEQuence:SOURce EXTernal1  /*Sets the trigger source to
external trigger.*/
:TRIGger:SEQuence:SOURce?  /*The query returns EXT1.*/
```

3.14.2 :TRIGger[:SEQuence]:ATRigger

Syntax

:TRIGger[:SEQuence]:ATRigger <*time*>

:TRIGger[:SEQuence]:ATRigger?

Description

Sets the time that the analyzer will wait for the trigger to be initiated automatically.

Queries the time that the analyzer will wait for the trigger to be initiated automatically.

Parameter

Name	Type	Range	Default
<time>	Real	1 ms to 100 s	100 ms

Remarks

This command is only valid when the auto triggering function is enabled.

Return Format

The query returns the time value in scientific notation. The unit is s.

Example

```
:TRIGger:SEQuence:ATRigger 0.2  /*Sets the auto trigger time to 200
ms.*/
:TRIGger:SEQuence:ATRigger?  /*The query returns 2.0E-01.*/
```

3.14.3 :TRIGger[:SEQuence]:ATRigger:STATe

Syntax

:TRIGger[:SEQuence]:ATRigger:STATe <*bool*>

:TRIGger[:SEQuence]:ATRigger:STATe?

Description

Enables or disables the auto trigger function.

Queries the setting status of auto trigger function.

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Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	OFF|0

Return Format

The query returns 1 or 0.

Example

```
:TRIGger:SEQuence:ATRigger:STATe ON  /*Enables the auto trigger.*/
:TRIGger:SEQuence:ATRigger:STATe?  /*The query returns 1.*/
```

3.14.4 :TRIGger[:SEQuence]:EXTernal1:DELay

Syntax

:TRIGger[:SEQuence]:EXTernal1:DELay <*time*>

:TRIGger[:SEQuence]:EXTernal1:DELay?

Description

Sets the delay time for the external trigger.

Queries the delay time for the external trigger.

Parameter

Name	Type	Range	Default
<time>	Real	-500 ms to 500 ms	1 μs

Remarks

When the trigger delay is set to a negative value, it indicates a pre-trigger.

This command is only valid when the external trigger delay state is enabled.

Return Format

The query returns the delay time for the external trigger in scientific notation. The unit is s.

Example

```
:TRIGger:SEQuence:EXTernal1:DELay 0.1  /*Sets the external trigger
delay time to 100 ms.*/
:TRIGger:SEQuence:EXTernal1:DELay?  /*The query returns 10.0E-02.*/
```

3.14.5 :TRIGger[:SEQuence]:EXTernal1:DELay:STATe

Syntax

:TRIGger[:SEQuence]:EXTernal1:DELay:STATe <*bool*>

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:TRIGger[:SEQuence]:EXTernal1:DELay:STATe?

Description

Enables or disables the external trigger delay function.

Queries the setting state of the external trigger delay function.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	OFF|0

Return Format

The query returns 1 or 0.

Example

```
:TRIGger:SEQuence:EXTernal1:DELay:STATe ON  /*Enables the external
trigger delay function.*/
:TRIGger:SEQuence:EXTernal1:DELay:STATe?  /*The query returns 1.*/
```

3.14.6 :TRIGger[:SEQuence]:EXTernal1:SLOPe

Syntax

:TRIGger[:SEQuence]:EXTernal1:SLOPe <*type*>

:TRIGger[:SEQuence]:EXTernal1:SLOPe?

Description

Sets the trigger edge of the external trigger.

Queries the trigger edge of the external trigger.

Parameter

Name	Type	Range	Default
<type>	Discrete	POSitive|NEGative	POSitive

Remarks

POSitive: indicates the rising edge.

NEGative: indicates the falling edge.

Return Format

The query returns POS or NEG.

Example

```
:TRIGger:SEQuence:EXTernal1:SLOPe POSitive  /*Sets the trigger edge
of the external trigger to POSitive.*/
:TRIGger:SEQuence:EXTernal1:SLOPe?  /*The query returns POS.*/
```

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3.14.7 :TRIGger[:SEQuence]:IF:DELay

Syntax

:TRIGger[:SEQuence]:IF:DELay <*time*>

:TRIGger[:SEQuence]:IF:DELay?

Description

Sets the delay time for the IF power trigger.

Queries the delay time for the IF power trigger.

Parameter

Name	Type	Range	Default
<time>	Real	-500 ms to 500 ms	1 μs

Remarks

When the trigger delay is set to a negative value, it indicates a pre-trigger.

This command is only valid when the IF power trigger function is enabled.

Return Format

The query returns the delay time for IF power trigger in scientific notation. The unit is s.

Example

```
:TRIGger:SEQuence:IF:DELay 0.01  /*Sets IF power trigger delay time
to 10 ms.*/
:TRIGger:SEQuence:IF:DELay?  /*The query returns 1.0E-02.*/
```

3.14.8 :TRIGger[:SEQuence]:IF:DELay:STATe

Syntax

:TRIGger[:SEQuence]:IF:DELay:STATe <*bool*>

:TRIGger[:SEQuence]:IF:DELay:STATe?

Description

Enables or disables the IF power trigger delay.

Queries the status of the IF power trigger delay.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	OFF|0

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Return Format

The query returns 1 or 0.

Example

```
:TRIGger:SEQuence:IF:DELay:STATe ON  /*Enables the IF power trigger
delay function.*/
:TRIGger:SEQuence:IF:DELay:STATe?  /*The query returns 1.*/
```

3.14.9 TRIGger[:SEQuence]:IF:LEVel

Syntax

:TRIGger[:SEQuence]:IF:LEVel <*time*>

:TRIGger[:SEQuence]:IF:LEVel?

Description

Sets the trigger level of the IF power trigger.

Queries the trigger level of the IF power trigger.

Parameter

Name	Type	Range	Default
<time>	Real	(-140+Level Offset) to (30+Level Offset)	-25 dBm

Remarks

This command is only valid when the IF power trigger function is enabled.

Return Format

The query returns the trigger level of the IF power trigger in scientific notation.

Example

```
:TRIGger:SEQuence:IF:LEVel 10  /*Sets the trigger level of the IF
power trigger to 10 dBm.*/
:TRIGger:SEQuence:IF:LEVel?  /*The query returns 1.0E+01.*/
```

3.14.10 :TRIGger[:SEQuence]:HOLDoff

Syntax

:TRIGger[:SEQuence]:HOLDoff <*time*>

:TRIGger[:SEQuence]:HOLDoff?

Description

Sets the trigger holdoff time.

Queries the trigger holdoff time.

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Parameter

Name	Type	Range	Default
<time>	Real	0 μs to 500 ms	100 ms

Remarks

This command is only valid when the trigger holdoff function is enabled.

Return Format

The query returns the trigger holdoff time in scientific notation. The unit is s.

Example

```
:TRIGger:SEQuence:HOLDoff 0.1  /*Sets the trigger holdoff time to
100 ms.*/
:TRIGger:SEQuence:HOLDoff?  /*The query returns 10.0E-02.*/
```

3.14.11 :TRIGger[:SEQuence]:HOLDoff:STATe

Syntax

:TRIGger[:SEQuence]:HOLDoff:STATe <*bool*>

:TRIGger[:SEQuence]:HOLDoff:STATe?

Description

Enables or disables the trigger holdoff function.

Queries the status of the trigger holdoff function.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	OFF|0

Return Format

The query returns 1 or 0.

Example

```
:TRIGger:SEQuence:HOLDoff:STATe ON  /*Enables the trigger holdoff
function.*/
:TRIGger:SEQuence:HOLDoff:STATe?  /*The query returns 1.*/
```

3.14.12 :TRIGger[:SEQuence]:OUTPut

Syntax

:TRIGger[:SEQuence]:OUTPut <*bool*>

:TRIGger[:SEQuence]:OUTPut?

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Description

Sets the trigger output state.

Queries the on/off status of trigger output.

Parameter

Name	Type	Range	Default
<bool>	Bool	OFF|ON|0|1	OFF|0

Return Format

The query returns 1 or 0.

Example

```
:TRIGger:SEQuence:OUTPut 1  /*Enables the external trigger output.*/
:TRIGger:SEQuence:OUTPut?  /*The query returns 1.*/
```

3.14.13 :TRIGger[:SEQuence]:OUTPut:POLarity

Syntax

:TRIGger[:SEQuence]:OUTPut:POLarity <*type*>

:TRIGger[:SEQuence]:OUTPut:POLarity?

Description

Set the external trigger output polarity.

Queries the external trigger output polarity.

Parameter

Name	Type	Range	Default
<type>	Discrete	POSitive|NEGative	POSitive

Remarks

POSitive: indicates positive polarity.

NEGative: indicates negative polarity.

Return Format

The query returns POS or NEG.

Example

```
:TRIGger:SEQuence:OUTPut:POLarity POSitive  /*Sets the output
polarity of external trigger to POSitive.*/
:TRIGger:SEQuence:OUTPut:POLarity?  /*The query returns POS.*/
```

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4 Appendix

4.1 Appendix A: Options and Accessories

	Description	Order No.
Model	Real-time Spectrum Analyzer, 5 kHz to 8.5 GHz	RSA6085
	Real-time Spectrum Analyzer, 5 kHz to 14 GHz	RSA6140
	Real-time Spectrum Analyzer, 5 kHz to 26.5 GHz	RSA6265
Standard Accessory	Power Cord	-
Options	Vector Signal Analysis Application Software	RSA6000-VSA
	EMI Measurement Application Software	RSA6000-EMI
	Analog Demodulation Application Software	RSA6000-ADM
	Preamplifier (PA), 8.5 GHz	RSA6000-P08
	Preamplifier (PA), 14 GHz	RSA6000-P14
	Preamplifier (PA), 26.5 GHz	RSA6000-P26
	200 MHz Analysis Bandwidth	RSA6000-B200
	200 MHz Real-time Bandwidth	RSA6000-RB200
	Advanced Measurement Kit	RSA6000-AMK
	8.5 GHz Tracking Generator Output	RSA6000-T08
Optional Accessories	DSA utility kit. Refer to *Note[1]* for details.	DSA Utility Kit
	RF adaptor kit. Refer to *Note[2]* for details.	RF Adaptor Kit
	Includes: 50 Ω to 75 Ω adaptor (2pcs)	RF CATV Kit
	Includes: 6 dB attenuator (1pcs), 10 dB attenuator (2pcs)	RF Attenuator Kit
	30 dB high-power attenuator, with the max. power of 100 W	ATT03301H
	N(M)-N(M) RF Cable	CB-NM-NM-75-L-12G
	N(M)-SMA(M) RF Cable	CB-NM-SMAM-75-L-12G
	Near-field Probe	NFP-3
	USB Cable x1	CB-USBA-USBB-FF-150

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NOTE

- For all the mainframes, accessories, and options, please contact the local office of RIGOL.
- [1]: Includes N-SMA cable, BNC-BNC cable, N-BNC adaptor, N-SMA adaptor, 75 Ω-50 Ω adaptor, 900 MHz/1.8 GHz antenna (2pcs), 2.4 GHz antenna (2pcs)
- [2]: Includes: N(F)-N(F) adaptor (1pcs), N(M)-N(M) adaptor (1pcs), N(M)-SMA(F) adaptor (2pcs), N(M)-BNC(F) adaptor (2pcs), SMA(F)-SMA(F) adaptor (1pcs), SMA(M)-SMA(M) adaptor (1pcs), BNC T type adaptor (1pcs), 50 Ω SMA load (1pcs), 50 Ω BNC impedance adaptor (1pcs)

4.2 Appendix B: Warranty

RIGOL TECHNOLOGIES CO., LTD. (hereinafter referred to as RIGOL) warrants that the product mainframe and product accessories will be free from defects in materials and workmanship within the warranty period. If a product proves defective within the warranty period, RIGOL guarantees free replacement or repair for the defective product.

To get repair service, please contact your nearest RIGOL sales or service office.

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