



**Spectrum Analyzer
Programming Manual**



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SCPI Introduction

SCPI (Standard Commands for Programmable Instrument) is a standard instruction set for programmable devices under IEEE 488.2. SCPI commands are divided into two parts: IEEE 488.2 Common Commands and SCPI Instrument Specific Control Commands.

Common commands are commands that the instrument specified in IEEE 488.2 must support. Its syntax and semantics follow IEEE 488.2. Common commands are independent from the measurement and are used to control reset, self-test and status inspection. For an introduction of SCPI common commands, refer to the relative chapter below.

SCPI instrument-specific control commands are used to measure, read data, and toggle switches, including all measurement functions and specific functions. .

Command Format

The SCPI command is a tree hierarchy that includes multiple subsystems, each consisting of a root key and one or more level keys. The command line usually begins with a colon ":"; the keywords are separated by the colon ":" followed by the optional parameter settings; the question mark "?" is added after the command line to query this function; the commands and parameters separate with "space".

E.g

```
:CALCulate:BANDwidth:NDB <rel_ampl>
```

```
:CALCulate:BANDwidth:NDB?
```

CALCulate is the root keyword of the command, BANDwidth and NDB are the second level, third level keywords. The command line starts with a colon ":" and at the same time separates keywords at all levels, <rel_ampl> indicates configurable parameters; the question mark "?" indicates a query; the command: CALCulate:BANDwidth:NDB and parameter <rel_ampl> "separate.

In some commands with parameters, it is common to use commas "," to separate the parameters, for example:

```
:SYSTEM:DATE <year>,<month>,<day>
```

Symbol Description

The following four symbols are not part of the SCPI command, but are usually used to assist in specifying the parameters in the command. .

Brace { }

Parameters in brace are optional and can be set one or more times or even don't set them. E.g:

The frequency and magnitude of {, <freq>, <rel_ampl>} in the command [:SENSe]:CORRection:CSET <n>:DATA <freq>, <rel_ampl> {, <freq>, <rel_ampl>} can be omitted, or to set one or more pairs of frequency and amplitude parameters.

Vertical bar |

Vertical bars are used to separate multiple parameter options, one of which must be selected when sending commands. E.g,

In DISPLAY:MENU:STATe OFF | ON | 0 | 1 command, the parameters that can be selected are "OFF", "ON", "0" or "1".

Square bracket []

The contents of the square bracket (command key) are optional and are executed regardless of whether they are omitted. E.g

[:SENSe]:CORRection:OFFSet[:MAGNitude]?

The effect of sending the following three commands is the same:

:CORRection:OFFSet?

:CORRection:OFFSet:MAGNitude?

:SENSe:CORRection:OFFSet?

Triangle bracket < >

The parameters in the triangle brackets must be replaced with a valid value. E.g:

:DISPlay:BRIGtness <integer>

:DISPlay:BRIGtness 10

Parameter Type

The commands contain 8 kinds of parameters, different parameters have different setting methods.

(1) arbitrary block

A specified length of arbitrary data, for example,

#6377512xxxxx . . . where

6 indicates that the following 6 digits (377512) specify the length of the data in bytes; xxxxx ...

indicates the data or #0xxxxx...<LF><&EOI>

(2) boolean

Boolean numbers or values, for example,

ON or ≠ 0

OFF or 0

(3) discrete

A list of specific values, for example,

MIN, MAX

(4) NR1 numeric

Integers, for example,
0, 2, 30, -5

(5) NR2 numeric

Decimal numbers, for example,
0.6, 3.1415926, -2.6

(6) NR3 numeric

Floating point numbers, for example,
3.1415E-7, -8.2E3

(7) NRf numeric

Flexible decimal number that may be type NR1, NR2 or NR3
See NR1, NR2, and NR3 examples

(8) string

Alphanumeric characters (must be within quotation marks)
"Model, 123456"

Command abbreviation

All commands are not case sensitive, you can use all uppercase or lowercase. However, if you want to abbreviate, you must enter all capital letters in the command format, for example:
:CALCulate:BANDwidth:NDB? can be abbreviated into:CALC:BAND:NDB?

Third-party programming entrance

The analyzer and the computer can communicate through the following interfaces: LAN interface and USB interface. please refer to the product's user manual for the use of various communication interface.

When using commands to program, all command words are sent and recognized as ASCII strings for operation and secondary development.

You can implement the following actions by programming:

- Set the analyzer
- Implement the measurement

Get data from the spectrum analyzer (instrument working status and measurement data results)

SCPI Command Set

In this command set, unless otherwise specified, the query function returns **"N/A"** (without the quotes) when the function is optional and not installed. And when the query function is not turned on or the type does not match, it returns **"ERR"** (without quotes).

IEEE 488.2 Common Commands

The IEEE standard defines some common commands for querying basic information about the instrument or performing common basic operations. The commands usually start with "*" and the command keyword is three characters in length.

*IDN?

Description	Queries the manufacturer, model number, serial number, and firmware version of the instrument.	
Query Syntax	*IDN?	
Return parameter	<string>	Returns the instrument identification as a string in the following format: OWON, HSA1015-TG, 1712074, V3.0.5.1 Manufacturer: OWON Model number: HSA1015-TG Serial number: 1712074 Firmware version: V3.0.5.1

*RST

Description	perform a factory reset.
Syntax	*RST

CALCulate Commands

:CALCulate:BWIDth | BANDwidth:NDB

Description	Sets the power level, below the peak of the signal, at which the signal bandwidth will be measured by the markers. <i>:CALCulate:BWIDth BANDwidth[:STATe]</i> must be ON.	
Syntax	:CALCulate:BWIDth BANDwidth:NDB <rel_ampl>	
Query Syntax	:CALCulate:BWIDth BANDwidth:NDB?	
Parameter	<rel_ampl>	<NR2> 1 dB to 60 dB
Return parameter	<NR3>	
Example	:CALC:BAND:NDB 5	

:CALCulate:BWIDth | BANDwidth:RESult?

Description	Returns the NdB bandwidth measurement.	
Query Syntax	:CALCulate:BWIDth BANDwidth:RESult?	
Return parameter	<NR1>	NdB bandwidth in Hz.
Example	:CALC:BAND:RES? returns 26000	

:CALCulate:BWIDth | BANDwidth[:STATe]

Description	Sets or queries the state of the NdB bandwidth measurement function. The function measures the bandwidth, at the number of dB down specified in <i>:CALCulate:BWIDth BANDwidth:NDB</i> , of the maximum signal on the display.	
Syntax	:CALCulate:BWIDth BANDwidth[:STATe] {OFF ON 0 1}	
Query Syntax	:CALCulate:BWIDth BANDwidth[:STATe]?	
Parameter	0	Turns NdB BW off.
	1	Turns NdB BW on.
	OFF	Turns NdB BW off.
	ON	Turns NdB BW on.
Return parameter	0	NdB BW is off.
	1	NdB BW is on.
Example	:CALC:BAND ON	

:CALCulate:MARKer:AOff

Description	Turns all the markers off.
Syntax	:CALCulate:MARKer:AOff
Example	:CALC:MARK:AOff

:CALCulate:MARKer<n>:CPEak[:STATe]

Description	Sets or queries the state of continuous peaking. It continuously puts the selected marker on the highest displayed signal peak. This function is intended to maintain the marker on signals with a frequency that is changing, and an amplitude that is not changing.	
Syntax	:CALCulate:MARKer<n>:CPEak[:STATe] {OFF ON 0 1}	
Query Syntax	:CALCulate:MARKer<n>:CPEak[:STATe]?	
Parameter	<n>	<NR1> Marker number 1 to 5
	0	Turns continuous peaking off.
	1	Turns continuous peaking on.
	OFF	Turns continuous peaking off.
	ON	Turns continuous peaking on.
Return parameter	0	Continuous peaking is off.
	1	Continuous peaking is on.
Example	:CALC:MARK1:CPE ON	

:CALCulate:MARKer<n>:DELTA[:SET]:CENTer

Description	Changes the center frequency of the analyzer to the frequency difference between the two markers. This command is not available if the delta marker is off.	
Syntax	:CALCulate:MARKer<n>:DELTA[:SET]:CENTer	
Parameter	<n>	<NR1> Marker number 1 to 5
Example	:CALC:MARK1:DELT:CENT	

:CALCulate:MARKer<n>:DELTA[:SET]:SPAN

Description	Changes the span of the analyzer to the frequency difference between the two markers. This command is not available if the delta marker is off.	
Syntax	:CALCulate:MARKer<n>:DELTA[:SET]:SPAN	
Parameter	<n>	<NR1> Marker number 1 to 5
Example	:CALC:MARK1:DELT:SPAN	

:CALCulate:MARKer:FCOunt:RESolution

Description	Sets or queries the frequency counter resolution in Hz.	
Syntax	:CALCulate:MARKer:FCOunt:RESolution <freq>	
Query Syntax	:CALCulate:MARKer:FCOunt:RESolution?	
Parameter	<freq>	Frequency resolution in Hz Only 1000, 100, 10, 1 Hz are meaningful.
Return parameter	<freq>	Frequency resolution in Hz
Example	:CALC:MARK:FCO:RES 1	

:CALCulate:MARKer<n>:FCOunt[:STATe]

Description	Sets or queries the state of the marker frequency counter function.	
Syntax	:CALCulate:MARKer<n>:FCOunt[:STATe] {OFF ON 0 1}	
Query Syntax	:CALCulate:MARKer<n>:FCOunt[:STATe]?	
Parameter	<n>	<NR1> Marker number 1 to 5.
	0	Turns frequency counter off.
	1	Turns frequency counter on.
	OFF	Turns frequency counter off.
	ON	Turns frequency counter on.
Return parameter	0	Frequency counter is off.
	1	Frequency counter is on.
Example	:CALC:MARKer1:FCO 1	

:CALCulate:MARKer<n>:FCOunt:X?

Description	Returns the counter frequency of the selected marker in Hz.	
Query Syntax	:CALCulate:MARKer<n>:FCOunt:X?	
Parameter	<n>	<NR1> Marker number 1 to 5.
Return parameter	<freq>	<NR1> Frequency in Hz.
Example	:CALC:MARK1:FCO:X? returns 230580000	

:CALCulate:MARKer:FUNction:AOff

Description	Turns off the opened noise markers or NdB BW measurements, but not the markers themselves.	
Syntax	:CALCulate:MARKer:FUNction:AOff	
Example	:CALC:MARK:FUNC:AOff	

:CALCulate:MARKer<n>:MAXimum

Description	Performs peak search and places a marker on the highest peak.
Syntax	:CALCulate:MARKer<n>:MAXimum
Parameter	<n> <NR1> Marker number 1 to 5
Example	:CALC:MARK1:MAX

:CALCulate:MARKer<n>:MAXimum:LEFT

Description	Places the selected marker on the next highest signal peak to the left of the current marked peak.
Syntax	:CALCulate:MARKer<n>:MAXimum:LEFT
Parameter	<n> <NR1> Marker number 1 to 5
Example	:CALC:MARK1:MAX:LEFT

:CALCulate:MARKer<n>:MAXimum:NEXT

Description	Places the selected marker on the next highest signal peak from the current marked peak.
Syntax	:CALCulate:MARKer<n>:MAXimum:NEXT
Parameter	<n> <NR1> Marker number 1 to 5
Example	:CALC:MARK1:MAX:NEXT

:CALCulate:MARKer<n>:MAXimum:RIGHT

Description	Places the selected marker on the next highest signal peak to the right of the current marked peak.
Syntax	:CALCulate:MARKer<n>:MAXimum:RIGHT
Parameter	<n> <NR1> Marker number 1 to 5
Example	:CALC:MARK1:MAX:RIGHT

:CALCulate:MARKer<n>:MINimum

Description	Places the selected marker on the lowest point on the trace that is assigned to that particular marker number.
Syntax	:CALCulate:MARKer<n>:MINimum
Parameter	<n> <NR1> Marker number 1 to 5
Example	:CALC:MARK1:MIN

:CALCulate:MARKer<n>:MODE

Description	Sets or queries the marker type.	
Syntax	:CALCulate:MARKer<n>:MODE {NORMal DELTA}	
Query Syntax	:CALCulate:MARKer<n>:MODE?	
Parameter/ Return parameter	<n>	<NR1> Marker number 1 to 5.
	<NORMal>	Normal marker
	<DELTA>	Delta marker
Example	:CALC:MARK1:MODE NORM	

:CALCulate:MARKer<n>:PHNoise[:STATE]

Description	Sets or queries the state of the Marker Noise function for the specified marker. This function measures the average noise level at the marked point and then normalize this value to 1 Hz bandwidth.	
Syntax	:CALCulate:MARKer<n>:PHNoise[:STATE] {OFF ON 0 1}	
Query Syntax	:CALCulate:MARKer<n>:PHNoise[:STATE]?	
Parameter	<n>	<NR1> Marker number 1 to 5.
	0	Turns Marker Noise off.
	1	Turns Marker Noise on.
	OFF	Turns Marker Noise off.
	ON	Turns Marker Noise on.
Return parameter	0	Marker Noise is off.
	1	Marker Noise is on.
Example	:CALC:MARK1:PHN ON	

:CALCulate:MARKer:PHNoise:Y?

Description	Returns the normalized noise level over a BW of 1Hz from the marker position.	
Query Syntax	:CALCulate:MARKer:PHNoise:Y?	
Return parameter	<NR2>	Normalized noise level in dBm.
Example	:CALC:MARK:PHN:Y? returns 127.8	

:CALCulate:MARKer<n>[:SET]:CENTer

Description	Sets the center frequency equal to the specified marker frequency, which moves the marker to the center of the screen. In delta marker mode, the center frequency is set to the delta marker frequency. This command is not available in zero span.
Syntax	:CALCulate:MARKer<n>[:SET]:CENTer
Parameter	<n> <NR1> Marker number 1 to 5
Example	:CALC:MARK1:CENT

:CALCulate:MARKer<n>[:SET]:RLEVel

Description	Sets the reference level to the specified marker amplitude. In delta marker mode, the reference level is set to the delta marker amplitude.
Syntax	:CALCulate:MARKer<n>[:SET]:RLEVel
Parameter	<n> <NR1> Marker number 1 to 5
Example	:CALC:MARK1:RLEV

:CALCulate:MARKer<n>[:SET]:STARt

Description	Sets the start frequency to the value of the specified marker frequency. In delta marker mode, the start frequency is set to the delta marker frequency. This command is not available in zero span.
Syntax	:CALCulate:MARKer<n>[:SET]:STARt
Parameter	<n> <NR1> Marker number 1 to 5
Example	:CALC:MARK1:STAR

:CALCulate:MARKer<n>[:SET]:STEP

Description	Sets the center frequency step size equal to the specified marker frequency. In delta marker mode, the center frequency step size is set to the delta marker frequency. This command is not available in zero span.
Syntax	:CALCulate:MARKer<n>[:SET]:STEP
Parameter	<n> <NR1> Marker number 1 to 5
Example	:CALC:MARK1:STEP

:CALCulate:MARKer<n>[:SET]:STOP

Description	Sets the stop frequency to the value of the specified marker frequency. In delta marker mode, the stop frequency is set to the delta marker frequency. This command is not available in zero span.
Syntax	:CALCulate:MARKer<n>[:SET]:STOP
Parameter	<n> <NR1> Marker number 1 to 5
Example	:CALC:MARK1:STOP

:CALCulate:MARKer<n>:STATE

Description	Sets or queries the state of the selected marker.
Syntax	:CALCulate:MARKer<n>:STATe {OFF ON 0 1}
Query Syntax	:CALCulate:MARKer<n>:STATe?
Parameter	<n> <NR1> Marker number 1 to 5. 0 Turns the selected marker off. 1 Turns the selected marker on. OFF Turns the selected marker off. ON Turns the selected marker on.
Return parameter	0 The selected marker is off. 1 The selected marker is on.
Example	:CALC:MARK1:STAT ON

:CALCulate:MARKer:TABLE:STATE

Description	Sets or queries the state of the marker table.
Syntax	:CALCulate:MARKer:TABLE:STATe {OFF ON 0 1}
Query Syntax	:CALCulate:MARKer:TABLE:STATe?
Parameter	0 Turns the table off. 1 Turns the table on. OFF Turns the table off. ON Turns the table on.
Return parameter	0 The table is off. 1 The table is on.
Example	:CALC:MARK:TABL:STAT ON

:CALCulate:MARKer<n>:TRACe

Description	Sets or queries the state of continuous peaking. It continuously puts the selected marker on the highest displayed signal peak. This function is intended to maintain the marker on signals with a frequency that is changing, and an amplitude that is not changing.
Syntax	:CALCulate:MARKer<n>:TRACe <integer>
Query Syntax	:CALCulate:MARKer<n>:TRACe?
Parameter/	<n> <NR1> Marker number 1 to 5
Return parameter	<integer> The number of the trace: (1, 2, 3, 4, 5)
Example	:CALC:MARK1:TRAC 2

:CALCulate:MARKer<n>:DELTA:X?

Description	Returns the reference marker position of delta marker.
Query Syntax	:CALCulate:MARKer<n>:DELTA:X?
Parameter	<n> <NR1> Marker number 1 to 5
Return parameter	<freq> Frequency in Hz.
Example	:CALC:MARK3:DELT:X? returns 300000000Hz

:CALCulate:MARKer<n>:DELTA:Y?

Description	Returns the reference marker's vertical position of delta marker.
Query Syntax	:CALCulate:MARKer<n>:DELTA:Y?
Parameter	<n> <NR1> Marker number 1 to 5
Return parameter	<ampl> Power or voltage. If the specified marker is not active, returns ERR.
Example	:CALC:MARK3:DELT:Y? returns 9.8dBm

:CALCulate:MARKer<n>:X

Description	Sets or returns the marker position. In delta marker mode, this command returns the frequency difference between the markers.
Syntax	:CALCulate:MARKer<n>:X <freq>
Query Syntax	:CALCulate:MARKer<n>:X?

SCPI Command Set

Parameter	<n>	<NR1> Marker number 1 to 5
	<freq>	Frequency in GHz, MHz, kHz, Hz. The default unit is Hz.
Return parameter	<freq>	Frequency in Hz. If the specified marker is not active, returns ERR.
Example	:CALC:MARK2:X 300MHz query :CALC:MARK2:X? returns 300000000Hz	

:CALCulate:MARKer<n>:Y?

Description	Returns the marker's vertical position. In delta marker mode, this command returns the amplitude difference between the markers.	
Query Syntax	:CALCulate:MARKer<n>:Y?	
Parameter	<n>	<NR1> Marker number 1 to 5
Return parameter	<ampl>	Power or voltage. If the specified marker is not active, returns ERR.
Example	:CALC:MARK3:Y? returns 9.8dBm	

:CALCulate:NETMeasure:POWER

Description	Sets or queries the network measurement output power level.	
Syntax	:CALCulate:NETMeasure:POWER <ampl>	
Query Syntax	:CALCulate:NETMeasure:POWER?	
Parameter	<ampl>	<NRf> Power or voltage, -30dBm to 0dbm
Return parameter	<NR2>	
Example	:CALC:NETM:POW -10	

:CALCulate:NTDate:NORMALize

Description	Turns the tracking generator normalization on/off or queries its state.	
Syntax	:CALCulate:NTDate:NORMALize {OFF ON 0 1}	
Query Syntax	:CALCulate:NTDate:NORMALize?	

SCPI Command Set

Parameter	0	Turns the normalization off.
	1	Turns the normalization on.
	OFF	Turns the normalization off.
	ON	Turns the normalization on.
Return parameter	0	The normalization is off.
	1	The normalization is on.
Example	:CALC:NTD:NORM ON	

:CALCulate:TUNE:AUTO

Description	Runs the auto tune function.
Syntax	:CALCulate:TUNE:AUTO
Example	:CALC:TUNE:AUTO

CALibration Commands

:CALibration[:ALL]

Description	After connecting the calibration signal to front panel RF Input connector, execute :CAL to perform the calibration.
Syntax	:CALibration[:ALL]
Query Syntax	:CALibration[:ALL]?
Return parameter	1 The calibration is successful.
Example	:CAL

:CALibration:REStore

Description	Restores the calibration settings originally set at the factory.
Syntax	:CALibration:REStore
Example	:CAL:REST

CONFigure Commands

:CONFigure:ACPower

Description	This command places the analyzer in Adjacent Channel Power measurement state.
Syntax	:CONFigure:ACPower
Example	:CONF:ACP

:CONFigure:CHPower

Description	This command places the analyzer in Channel Power measurement state.
Syntax	:CONFigure:CHPower
Example	:CONF:CHP

:CONFigure:OBWidth

Description	This command places the analyzer in Occupied Bandwidth measurement state.
Syntax	:CONFigure:OBWidth
Example	:CONF:OBW

:CONFigure:SANalyzer

Description	Directly exit the currently running measurement function.
Syntax	:CONFigure:SANalyzer
Example	:CONF:SAN

:CONFigure:SATime

Description	Turns on or off time spectrum measure mode.
Syntax	:CONFigure:SATime
Example	:CONF:SAT

DISPlay Commands

:DISPlay:ANNotation:CLOCK:DATE:FORMat

Description	Sets or queries the display format of date&time.	
Syntax	:DISPlay:ANNotation:CLOCK:DATE:FORMat {YMDhms HMSymd}	
Query Syntax	:DISPlay:ANNotation:CLOCK:DATE:FORMat?	
Parameter/	YMDhms	Set the display format of date&time to YYYY-MM-DD HH:MM:SS.
Return parameter	HMSymd	Set the display format of date&time to HH:MM:SS YYYY-MM-DD.
Example	:DISP:ANN:CLOC:DATE:FORM YMDhms	

:DISPlay:ANNotation:CLOCK[:STATe]

Description	Turns the on-screen date&time display on/off or queries its state.	
Syntax	:DISPlay:ANNotation:CLOCK[:STATe] {OFF ON 0 1}	
Query Syntax	:DISPlay:ANNotation:CLOCK[:STATe]?	
Parameter	0	Turns the date&time display off.
	1	Turns the date&time display on.
	OFF	Turns the date&time display off.
	ON	Turns the date&time display on.
Return parameter	0	The date&time display is off.
	1	The date&time display is on.
Example	:DISP:ANN:CLOC ON	

:DISPlay:FORMat:ZOOM

Description	Turns the zoom-in window on/off or queries its state. The zoomed window centers on the center frequency, and its span is 1/10 of the previous span.	
Syntax	:DISPlay:FORMat:ZOOM {OFF ON 0 1}	
Query Syntax	:DISPlay:FORMat:ZOOM?	
Parameter	0	Turns the zoom-in window off.
	1	Turns the zoom-in window on.
	OFF	Turns the zoom-in window off.
	ON	Turns the zoom-in window on.
Return parameter	0	The zoom-in window is off.
	1	The zoom-in window is on.
Example	:DISP:FORM:ZOOM ON	

:DISPlay:MENU:STATe

Description	Turns the full screen display mode on/off or queries its state.	
Syntax	:DISPlay:MENU:STATe {OFF ON 0 1}	
Query Syntax	:DISPlay:MENU:STATe?	
Parameter	0	Turns the full screen display mode off.
	1	Turns the full screen display mode on.
	OFF	Turns the full screen display mode off.
	ON	Turns the full screen display mode on.
Return parameter	0	The full screen display mode is off.
	1	The full screen display mode is on.
Example	:DISP:MENU:STAT ON	

:DISPlay:WINDow:GRID

Description	Turns the on-screen grid on/off or queries its state.	
Syntax	:DISPlay:WINDow:GRID {OFF ON 0 1}	
Query Syntax	:DISPlay:WINDow:GRID?	
Parameter	0	Turns the grid off.
	1	Turns the grid on.
	OFF	Turns the grid off.
	ON	Turns the grid on.
Return parameter	0	The grid is off.
	1	The grid is on.
Example	:DISP:WIN:GRID ON	

:DISPlay:WINDow:LABEL

Description	Turns the on-screen label on/off or queries its state.	
Syntax	:DISPlay:WINDow:LABEL {OFF ON 0 1}	
Query Syntax	:DISPlay:WINDow:LABEL?	
Parameter	0	Turns the label off.
	1	Turns the label on.
	OFF	Turns the label off.
	ON	Turns the label on.
Return parameter	0	The label is off.
	1	The label is on.
Example	:DISP:WIN:LABEL ON	

:DISPlay:WINDow:TRACe:X[:SCALe]:OFFSet

Description	Sets or queries the X-axis frequency offset.
Syntax	:DISPlay:WINDow:TRACe:X[:SCALe]:OFFSet <freq>
Query Syntax	:DISPlay:WINDow:TRACe:X[:SCALe]:OFFSet?
Parameter	<freq> <NRf>
Return parameter	<NR1> Frequency in Hz.
Example	:DISP:WIN:TRAC:X:OFFS 1000

:DISPlay:WINDow:TRACe:Y:DLINe

Description	Sets or queries the display line amplitude level.
Syntax	:DISPlay:WINDow:TRACe:Y:DLINe <ampl>
Query Syntax	:DISPlay:WINDow:TRACe:Y:DLINe?
Parameter	<ampl> <NRf> power or voltage in the current Y-axis unit.
Return parameter	<NR3>
Example	:DISP:WIN:TRAC:Y:DLIN -5.0e+1

:DISPlay:WINDow:TRACe:Y:DLINe:STATe

Description	Turns the display line on/off or queries its state.
Syntax	:DISPlay:WINDow:TRACe:Y:DLINe:STATe {OFF ON 0 1}
Query Syntax	:DISPlay:WINDow:TRACe:Y:DLINe:STATe?
Parameter	0 Turns the display line off. 1 Turns the display line on. OFF Turns the display line off. ON Turns the display line on.
Return parameter	0 The display line is off. 1 The display line is on.
Example	:DISP:WIN:TRAC:Y:DLIN:STAT ON

:DISPlay:WINDow:TRACe:Y[:SCALe]:GAUge

Description	Turns the on-screen scale on/off or queries its state.
Syntax	:DISPlay:WINDow:TRACe:Y[:SCALe]:GAUge {OFF ON 0 1}
Query Syntax	:DISPlay:WINDow:TRACe:Y[:SCALe]:GAUge?
Parameter	0 Turns the scale off. 1 Turns the scale on.

	OFF	Turns the scale off.
	ON	Turns the scale on.
Return parameter	0	The scale is off.
	1	The scale is on.
Example	:DISP:WIN:TRAC:Y:GAU ON	

:DISPlay:WINDow:TRACe:Y[:SCALe]:PDIVision

Description	Sets or queries the Y-axis scale/div when the amplitude scale is logarithmic.	
Syntax	:DISPlay:WINDow:TRACe:Y[:SCALe]:PDIVision <rel_ampl>	
Query Syntax	:DISPlay:WINDow:TRACe:Y[:SCALe]:PDIVision?	
Parameter/ Return parameter	<rel_ampl>	<NR1> 1 dB to 255 dB
Example	:DISP:WIN:TRAC:Y:PDIV 10	

:DISPlay:WINDow:TRACe:Y[:SCALe]:RLEVel

Description	Sets or queries the Y-axis reference level. The units depend on the scale type (logarithmic/linear).	
Syntax	:DISPlay:WINDow:TRACe:Y[:SCALe]:RLEVel <ampl>	
Query Syntax	:DISPlay:WINDow:TRACe:Y[:SCALe]:RLEVel?	
Parameter/ Return parameter	<ampl>	<NRf> in current active unit
	<NR3>	Current active unit
Example	:DISP:WIN:TRAC:Y:RLEV -10	

:DISPlay:WINDow:TRACe:Y[:SCALe]:RLEVel:OFFSet

Description	Sets or queries the Y-axis reference level offset.	
Syntax	:DISPlay:WINDow:TRACe:Y[:SCALe]:RLEVel:OFFSet <rel_ampl>	
Query Syntax	:DISPlay:WINDow:TRACe:Y[:SCALe]:RLEVel:OFFSet?	
Parameter	<rel_ampl>	<NRf> dB
Return parameter	<NR3>	
Example	:DISP:WIN:TRAC:Y:RLEV:OFFS -5.0e+1 dB	

:DISPlay:WINDow:TRACe:Y[:SCALe]:SPACing

Description	Sets or queries the type of scale: logarithmic or linear.	
Syntax	:DISPlay:WINDow:TRACe:Y[:SCALe]:SPACing {LINear LOGarithmic}	

SCPI Command Set

Query Syntax	:DISPlay:WINDow:TRACe:Y[:SCALe]:SPACing?	
Parameter/	LINear	Linear scale
Return parameter	LOGarithmic	Logarithmic scale
Example	:DISP:WIN:TRAC:Y:SPAC LOG	

HCOPY Commands

:HCOPY:IMAGe:COLor[:STATe]

Description	Turns the color printing on/off or queries its state.	
Syntax	:HCOPY:IMAGe:COLor[:STATe] {OFF ON 0 1}	
Query Syntax	:HCOPY:IMAGe:COLor[:STATe]?	
Parameter	0	Turns the color printing off.
	1	Turns the color printing on.
	OFF	Turns the color printing off.
	ON	Turns the color printing on.
Return parameter	0	The color printing is off.
	1	The color printing is on.
Example	:HCOPY:IMAG:COL 1	

:HCOPY:IMAGe:TYPE

Description	Sets or queries the language for printing. The default is PCL.	
Syntax	:HCOPY:IMAGe:TYPE {PCL ESC}	
Query Syntax	:HCOPY:IMAGe:TYPE?	
Parameter/	PCL	Set the language to PCL.
Return parameter	ESC	Set the language to ESC.
Example	:HCOPY:IMAG:TYP PCL	

:HCOPY:PAGE:ORientation

Description	Sets or queries the page orientation for printing.	
Syntax	:HCOPY:PAGE:ORientation {LANDscape PORTRait}	
Query Syntax	:HCOPY:PAGE:ORientation?	
Parameter/	LANDscape	Set the page orientation to landscape.
Return parameter	PORTRait	Set the page orientation to portrait.
Example	:HCOPY:PAGE:ORI LAND	

:HCOPY:PAGE:PRINTs

Description	Sets or queries the number of print copies.	
Syntax	:HCOPY:PAGE:PRINTs <number>	

SCPI Command Set

Query Syntax	:HCOPy:PAGE:PRINTs?
Parameter	<number> <NR1>
Return parameter	<NR1>
Example	:HCOP:PAGE:PRIN 1

:HCOPy:PAGE:SIZE

Description	Sets or queries the page size for printing. The default is A4.	
Syntax	:HCOPy:PAGE:SIZE {DEFault A4 A3 B5 C5 LETTer}	
Query Syntax	:HCOPy:PAGE:SIZE?	
Parameter/ Return parameter	DEFault A4	Set the page size to A4.
	A3	Set the page size to A3.
	B5	Set the page size to B5.
	C5	Set the page size to C5.
	LETTer	Set the page size to LETTER.
Example	:HCOPy:PAGE:SIZE A4	

:HCOPy:SCReen

Description	Print the screen.
Syntax	:HCOPy:SCReen
Example	:HCOP:SCR

:HCOPy:TRACe

Description	Print the trace.
Syntax	:HCOPy:TRACe
Example	:HCOP:TRAC

INITiate Commands

:INITiate:CONTInuous

Description	Sets the sweep mode to continuous or single mode or queries its state.	
Syntax	:INITiate:CONTInuous {OFF ON 0 1}	
Query Syntax	:INITiate:CONTInuous?	
Parameter	0	Sets the sweep mode to single.
	1	Sets the sweep mode to continuous.
	OFF	Sets the sweep mode to single.
	ON	Sets the sweep mode to continuous.
Return parameter	0	The sweep mode is single.
	1	The sweep mode is continuous.
Example	:INIT:CONT ON	

MMEMory Commands

:MMEMory:CATalog?

Description	Returns a list of all the files that have been saved to the local memory.
Query Syntax	:MMEMory:CATalog?
Example	:MMEM:CAT? returns 20171010_155852.csv,20171107_145956.png,20171107_150136.png,.....

:MMEMory:COpy:SCReen

Description	Exports the screen file to PC software.
Syntax	:MMEMory:COpy:SCReen <file_name>
Parameter	<file_name> XXX.png
Example	:MMEM:COpy:SCR 20171107_145956.png

:MMEMory:COpy:TRACe

Description	Exports the trace file to PC software.
Syntax	:MMEMory:COpy:TRACe <file_name>
Parameter	<file_name> XXX.csv
Example	:MMEM:COpy:TRAC 20171010_155852.csv

:MMEMory:DELeTe:ALL

Description	Deletes all files.
Syntax	:MMEMory:DELeTe:ALL
Example	:MMEM:DEL:ALL

:MMEMory:DELeTe:SCReen

Description	Deletes the selected screen file from the current directory.
Syntax	:MMEMory:DELeTe:SCReen <file_name>
Parameter	<file_name> XXX.png
Example	:MMEM:DEL:SCR 20171107_145956.png

:MMEMory:DELeTe:SCReen:ALL

Description	Deletes all screen files.
Syntax	:MMEMory:DELeTe:SCReen:ALL
Example	:MMEM:DEL:SCR:ALL

:MMEMory:DELeTe:TRACe

Description	Deletes the selected trace file from the current directory.
Syntax	:MMEMory:DELeTe:TRACe <file_name>
Parameter	<file_name> XXX.csv
Example	:MMEM:DEL:TRAC 20171010_155852.csv

:MMEMory:DELeTe:TRACe:ALL

Description	Deletes all trace files.
Syntax	:MMEMory:DELeTe:TRACe:ALL
Example	:MMEM:DEL:TRAC:ALL

:MMEMory:DISK:INFormation

Description	Returns the information of USB storage device.
Query Syntax	:MMEMory:DISK:INFormation?
Example	:MMEM:DISK:INF?

:MMEMory:LOAD:SCReen

Description	Loads screen data from a file to the internal memory.
Syntax	:MMEMory:LOAD:SCReen <file_name>
Parameter	<file_name> XXX.png
Example	:MMEM:LOAD:SCR 20171107_145956.png

:MMEMory:LOAD:TRACe

Description	Loads trace data from a file to TRACE1.
Syntax	:MMEMory:LOAD:TRACe <file_name>
Parameter	<file_name> XXX.csv

Example :MMEM:LOAD:TRAC 20171010_155852.csv

:MMEMory:STORe:QUICK:SAVE

Description	Quick save the screenshot. When a USB flash drive is inserted, the image is saved into the USB flash drive, otherwise saved into the internal memory.
Syntax	:MMEMory:STORe:QUICK:SAVE
Example	:MMEM:STOR:QUICK:SAVE

:MMEMory:STORe:SCReen

Description	Saves the current screen-shot to the internal memory. The file is named based on date/time, the format is png.
Syntax	:MMEMory:STORe:SCReen <file_name>
Parameter	<file_name> XXX.png
Example	:MMEM:STOR:SCR 20171107_145956.png

:MMEMory:STORe:STATe

Description	Saves the instrument state as a user self-defined configuration, which is used to set the analyzer power on parameters or preset parameters.
Syntax	:MMEMory:STORe:STATe
Example	:MMEM:STOR:STAT

:MMEMory:STORe:TRACe

Description	Saves the trace data to a file from the internal memory. The file is named based on date/time, the format is cvs.
Syntax	:MMEMory:STORe:TRACe <file_name>
Parameter	<file_name> XXX.csv
Example	:MMEM:STOR:TRAC 20171010_155852.csv

OUTPut Commands

:OUTPut:TRACk[:STATe]

Description	Turns the tracking generator output on/off or queries its state.	
Syntax	:OUTPut:TRACk[:STATe] {OFF ON 0 1}	
Query Syntax	:OUTPut:TRACk[:STATe]?	
Parameter	0	Turns TG output off.
	1	Turns TG output on.
	OFF	Turns TG output off.
	ON	Turns TG output on.
Return parameter	0	TG output is off.
	1	TG output is on.
Example	:OUTP:TRAC ON	

SENSE Commands

[[:SENSE]:ACPower:BANDwidth:ACHannel:COUNT

Description	Sets or queries the number of upper and lower adjacent channels measured by adjacent channel power.
Syntax	[[:SENSE]:ACPower:BANDwidth:ACHannel:COUNT <integer>
Query Syntax	[[:SENSE]:ACPower:BANDwidth:ACHannel:COUNT?
Parameter/ Return parameter	<integer> <NR1> Adjacent channels number
Example	:ACP:BAND:ACH:COUN 1

[[:SENSE]:ACPower:BANDwidth:INTegration

Description	Sets or queries the range of integration used in calculating the power in the main channel.
Syntax	[[:SENSE]:ACPower:BANDwidth:INTegration <freq>
Query Syntax	[[:SENSE]:ACPower:BANDwidth:INTegration?
Parameter	<freq> <NRf>
Return parameter	<NR3> Hz
Example	:ACP:BAND:INT 2.0e+7

[[:SENSE]:ACPower:CSPacing

Description	Sets or queries the channel spacing between the main channels.
Syntax	[[:SENSE]:ACPower:CSPacing <freq>
Query Syntax	[[:SENSE]:ACPower:CSPacing?
Parameter	<freq> <NRf>
Return parameter	<NR3> Hz
Example	:ACP:CSP 1.0e+8

[[:SENSE]:AVERage:COUNT

Description	Sets or queries the number of traces that are used with the average function.
Syntax	[[:SENSE]:AVERage:COUNT <integer>
Query Syntax	[[:SENSE]:AVERage:COUNT?

Parameter/ Return parameter	<integer> <NR1>
Example	:AVER:COUN 20

[[:SENSE]:AVERage[:STATe]

Description	Turns the Average function on/off or queries its state.	
Syntax	[:SENSE]:AVERage[:STATe] {OFF ON 0 1}	
Query Syntax	[:SENSE]:AVERage[:STATe]?	
Parameter	0	Turns the Average function off.
	1	Turns the Average function on.
	OFF	Turns the Average function off.
	ON	Turns the Average function on.
Return parameter	0	The Average function is off.
	1	The Average function is on.
Example	:AVER ON	

[[:SENSE]:BANDwidth | BWIDth[:RESolution]

Description	Sets or queries the resolution bandwidth (RBW).	
Syntax	[:SENSE]:BANDwidth BWIDth[:RESolution] <freq>	
Query Syntax	[:SENSE]:BANDwidth BWIDth[:RESolution]?	
Parameter	<freq>	<NRf>
Return parameter	<NR3>	Hz
Example	:BAND 1.0e+6	

[[:SENSE]:BANDwidth | BWIDth[:RESolution]:AUTO]

Description	Sets the RBW to auto (on) or manual (off) or queries its state.	
Syntax	[:SENSE]:BANDwidth BWIDth[:RESolution]:AUTO {OFF ON 0 1}	
Query Syntax	[:SENSE]:BANDwidth BWIDth[:RESolution]:AUTO?	
Parameter	0	Sets RBW to manual (off).
	1	Sets RBW to automatic (on).
	OFF	Sets RBW to manual (off).
	ON	Sets RBW to automatic (on).
Return parameter	0	RBW is set to manual (off).
	1	RBW is set to automatic (on).
Example	:BAND:AUTO ON	

[[:SENSE]:BANDwidth | BWIDth[:RESolution]:STEP:MODE

Description	Sets or queries the resolution bandwidth step mode (default or continuous).	
Syntax	[:SENSE]:BANDwidth BWIDth[:RESolution]:STEP:MODE {DEFault CONTInuous 0 1}	
Query Syntax	[:SENSe]:BANDwidth BWIDth[:RESolution]:STEP:MODE?	
Parameter	0	Sets the resolution bandwidth step to default mode (step at 1,3,5).
	1	Sets the resolution bandwidth step to continuous mode.
	DEFault	Sets the resolution bandwidth step to default mode (step at 1,3,5).
	CONTInuous	Sets the resolution bandwidth step to continuous mode.
Return parameter	0	The resolution bandwidth step mode is default.
	1	The resolution bandwidth step mode is continuous.
Example	:BAND:STEP:MODE 0	

[[:SENSE]:BANDwidth | BWIDth:VIDeo

Description	Sets or queries the video bandwidth (VBW).	
Syntax	[:SENSE]:BANDwidth BWIDth:VIDeo <freq>	
Query Syntax	[:SENSe]:BANDwidth BWIDth:VIDeo?	
Parameter	<freq>	<NRf>
Return parameter	<NR3>	Hz
Example	:BAND:VID 1.0e+6	

[[:SENSE]:BANDwidth | BWIDth:VIDeo:AUTO

Description	Sets the VBW to auto (on) or manual (off) or queries its state.	
Syntax	[:SENSE]:BANDwidth BWIDth:VIDeo:AUTO {OFF ON 0 1}	
Query Syntax	[:SENSe]:BANDwidth BWIDth:VIDeo:AUTO?	
Parameter	0	Sets VBW to manual (off).
	1	Sets VBW to automatic (on).
	OFF	Sets VBW to manual (off).
	ON	Sets VBW to automatic (on).
Return parameter	0	VBW is set to manual (off).
	1	VBW is set to automatic (on).
Example	:BAND:VID:AUTO OFF	

[[:SENSE]:BANDwidth:EMC

Description	Sets the EMI filter bandwidth (must be set to the exact bandwidth).
Syntax	[[:SENSE]:BANDwidth:EMC <freq>
Query Syntax	[[:SENSE]:BANDwidth:EMC?
Parameter	<freq> <NRf> (Only 200Hz, 9kHz, 120kHz, 1MHz are valid settings)
Return parameter	<NR3>
Example	BAND:EMC 200

[[:SENSE]:BANDwidth:EMC:STATe

Description	Turns the EMI filter on/off or queries its state.
Syntax	[[:SENSE]:BANDwidth:EMC:STATe {OFF ON 0 1}
Query Syntax	[[:SENSE]:BANDwidth:EMC:STATe?
Parameter	0 Turns the EMI filter off. 1 Turns the EMI filter on. OFF Turns the EMI filter off. ON Turns the EMI filter on.
Return parameter	0 The EMI filter is off. 1 The EMI filter is on.
Example	BAND:EMC:STAT 0

[[:SENSE]:DEMod:AM[:CARRier]:FREQuency

Description	Sets or queries the carrier frequency for AM demodulation.
Syntax	[[:SENSE]:DEMod:AM[:CARRier]:FREQuency <freq>
Query Syntax	[[:SENSE]:DEMod:AM[:CARRier]:FREQuency?
Parameter	<freq> <NRf>
Return parameter	<NR3> Hz
Example	:DEM:AM:FREQ 10 mhz

[[:SENSE]:DEMod:AM:IFBW

Description	Sets or queries the IF bandwidth for AM demodulation.
Syntax	[[:SENSE]:DEMod:AM:IFBW <freq>
Query Syntax	[[:SENSE]:DEMod:AM:IFBW?
Parameter	<freq> <NRf>

Return parameter	<NR3> Hz
Example	:DEM:AM:IFBW 3.0e+5

[[:SENSE]:DEMod:AM:IFBW:AUTO

Description	Sets or queries the state of auto IF bandwidth for AM demodulation.	
Syntax	[:SENSE]:DEMod:AM:IFBW:AUTO {OFF ON 0 1}	
Query Syntax	[:SENSE]:DEMod:AM:IFBW:AUTO?	
Parameter	0	Set IF bandwidth for AM demodulation to Manual.
	1	Set IF bandwidth for AM demodulation to Auto.
	OFF	Set IF bandwidth for AM demodulation to Manual.
	ON	Set IF bandwidth for AM demodulation to Auto.
Return parameter	0	IF bandwidth for AM demodulation is Manual.
	1	IF bandwidth for AM demodulation is Auto.
Example	:DEM:AM:IFBW:AUTO 1	

[[:SENSE]:DEMod:AM:STATe

Description	Sets or queries the state of AM demodulation.	
Syntax	[:SENSE]:DEMod:AM:STATe {OFF ON 0 1}	
Query Syntax	[:SENSE]:DEMod:AM:STATe?	
Parameter	0	Turns AM demodulation off.
	1	Turns AM demodulation on.
	OFF	Turns AM demodulation off.
	ON	Turns AM demodulation on.
Return parameter	0	AM demodulation is off.
	1	AM demodulation is on.
Example	:DEM:AM:STAT 1	

[[:SENSE]:DEMod:FM[:CARRier]:FREQuency

Description	Sets or queries the carrier frequency for FM demodulation.	
Syntax	[:SENSE]:DEMod:FM[:CARRier]:FREQuency <freq>	
Query Syntax	[:SENSE]:DEMod:FM[:CARRier]:FREQuency?	
Parameter	<freq>	<NRf>
Return parameter	<NR3>	Hz
Example	:DEM:FM:FREQ 10 mhz	

[[:SENSE]:DEMod:FM:IFBW

Description	Sets or queries the IF bandwidth for FM demodulation.	
Syntax	[:SENSE]:DEMod:FM:IFBW <freq>	
Query Syntax	[:SENSE]:DEMod:FM:IFBW?	
Parameter	<freq>	<NRf>
Return parameter	<NR3>	Hz
Example	:DEM:FM:IFBW 3.0e+5	

[[:SENSE]:DEMod:FM:IFBW:AUTO

Description	Sets or queries the state of auto IF bandwidth for FM demodulation.	
Syntax	[:SENSE]:DEMod:FM:IFBW:AUTO {OFF ON 0 1}	
Query Syntax	[:SENSE]:DEMod:FM:IFBW:AUTO?	
Parameter	0	Set IF bandwidth for FM demodulation to Manual.
	1	Set IF bandwidth for FM demodulation to Auto.
	OFF	Set IF bandwidth for FM demodulation to Manual.
	ON	Set IF bandwidth for FM demodulation to Auto.
Return parameter	0	IF bandwidth for FM demodulation is Manual.
	1	IF bandwidth for FM demodulation is Auto.
Example	:DEM:FM:IFBW:AUTO 1	

[[:SENSE]:DEMod:FM:STATe

Description	Sets or queries the state of FM demodulation.	
Syntax	[:SENSE]:DEMod:FM:STATe {OFF ON 0 1}	
Query Syntax	[:SENSE]:DEMod:FM:STATe?	
Parameter	0	Turns FM demodulation off.
	1	Turns FM demodulation on.
	OFF	Turns FM demodulation off.
	ON	Turns FM demodulation on.
Return parameter	0	FM demodulation is off.
	1	FM demodulation is on.
Example	:DEM:FM:STAT 1	

[[:SENSE]:DEMod:FREQuency

Description	Sets or queries the radio frequency for the audio demodulation function.	
Syntax	[:SENSE]:DEMod:FREQuency RADIO<n>,<freq>	

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Query Syntax	[:SENSe]:DEMod:FREQUency? RADIO<n>	
Parameter	<n>	<NR1> Radio sequence number 1 to 6
	<freq>	<NRf>
Return parameter	<NR3>	Hz
Example	:DEM:FREQ RADIO1,87.6 mhz	

[:SENSe]:DEMod:MODE

Description	Sets or queries the demodulation type for the audio demodulation function.	
Syntax	[:SENSe]:DEMod:MODE {FMW FM AM USB LSB}	
Query Syntax	[:SENSe]:DEMod:MODE?	
Parameter/	FMW	FMWdemodulation
Return parameter	FM	FM demodulation
	AM	AM demodulation
	USB	USBdemodulation
	LSB	LSB demodulation
Example	:DEM:MODE AM	

[:SENSe]:DEMod:STATe

Description	Turns the audio demodulation on/off or queries its state.	
Syntax	[:SENSe]:DEMod:STATe {OFF ON 0 1}	
Query Syntax	[:SENSe]:DEMod:STATe?	
Parameter	0	Turns the audio demodulation off.
	1	Turns the audio demodulation on.
	OFF	Turns the audio demodulation off.
	ON	Turns the audio demodulation on.
Return parameter	0	The audio demodulation is off.
	1	The audio demodulation is on.
Example	:DEM:STAT ON	

[:SENSe]:DETEctor[:FUNCTion]

Description	Sets or queries the trace detection mode.	
Syntax	[:SENSe]:DETEctor[:FUNCTion] {AUTO NORMal POSitive NEGative SAMPLE}	
Query Syntax	[:SENSe]:DETEctor[:FUNCTion]?	

Parameter/	AUTO	Sets the detector mode to Auto.
Return parameter	NORMAL	Sets the detector mode to Normal.
	POSitive	Sets the detector mode to Peak+.
	NEGative	Sets the detector mode to Peak-.
	SAMPLE	Sets the detector mode to Sample.
Example	:DET NORM	

[[:SENSE]:FREQUENCY:CENTER

Description	Sets or queries the center frequency.	
Syntax	[:SENSE]:FREQUENCY:CENTER <freq>	
Query Syntax	[:SENSE]:FREQUENCY:CENTER?	
Parameter	<freq>	<NRf>
Return parameter	<NR3>	Hz
Example	:FREQ:CENT 1.0e+9	

[[:SENSE]:FREQUENCY:CENTER:STEP:AUTO

Description	Sets the center frequency step size to auto (on) or manual (off) or queries its state.	
Syntax	[:SENSE]:FREQUENCY:CENTER:STEP:AUTO {OFF ON 0 1}	
Query Syntax	[:SENSE]:FREQUENCY:CENTER:STEP:AUTO?	
Parameter	0	Turn center frequency step to manual (off).
	1	Turn center frequency step to auto (on).
	OFF	Turn center frequency step to manual (off).
	ON	Turn center frequency step to auto (on).
Return parameter	0	Center frequency step is set to manual.
	1	Center frequency step is set to automatic.
Example	:FREQ:CENT:STEP:AUTO OFF	

[[:SENSE]:FREQUENCY:CENTER:STEP[:INCRement]

Description	Sets or queries the center frequency step frequency.	
Syntax	[:SENSE]:FREQUENCY:CENTER:STEP[:INCRement] <freq>	
Query Syntax	[:SENSE]:FREQUENCY:CENTER:STEP[:INCRement]?	
Parameter	<freq>	<NRf>
Return parameter	<NR3>	Hz
Example	FREQ:CENT:STEP 1000	

[[:SENSe]:FREQuency:REFerence

Description	Sets or queries the frequency reference to internal or external.	
Syntax	[:SENSe]:FREQuency:REFerence {INTernal EXTernal}	
Query Syntax	[:SENSe]:FREQuency:REFerence?	
Parameter/ Return parameter	INTernal	Internal reference
	EXTernal	External reference
Example	:FREQ:REF INT	

[[:SENSe]:FREQuency:SPAN

Description	Sets or queries the frequency span. Setting the span to 0 Hz puts the analyzer into zero span.	
Syntax	[:SENSe]:FREQuency:SPAN <freq>	
Query Syntax	[:SENSe]:FREQuency:SPAN?	
Parameter	<freq>	<NRf>
Return parameter	<NR3>	Hz
Example	:FREQ:SPAN 1.0e+9	

[[:SENSe]:FREQuency:SPAN:FULL

Description	Sets the frequency span to full scale.	
Syntax	[:SENSe]:FREQuency:SPAN:FULL	
Example	:FREQ:SPAN:FULL	

[[:SENSe]:FREQuency:SPAN:PREVious

Description	Sets the frequency span to the previous span setting.	
Syntax	[:SENSe]:FREQuency:SPAN:PREVious	
Example	:FREQ:SPAN:PREV	

[[:SENSe]:FREQuency:SPAN:ZERO

Description	Sets the frequency span to zero span.	
Syntax	[:SENSe]:FREQuency:SPAN:ZERO	
Example	:FREQ:SPAN:ZERO	

[[:SENSE]:FREQUENCY:START

Description	Sets or queries the start frequency.
Syntax	[[:SENSE]:FREQUENCY:START <freq>
Query Syntax	[[:SENSE]:FREQUENCY:START?
Parameter	<freq> <NRf>
Return parameter	<NR3> Hz
Example	:FREQ:STAR 0

[[:SENSE]:FREQUENCY:STOP

Description	Sets or queries the stop frequency.
Syntax	[[:SENSE]:FREQUENCY:STOP <freq>
Query Syntax	[[:SENSE]:FREQUENCY:STOP?
Parameter	<freq> <NRf>
Return parameter	<NR3> Hz
Example	:FREQ:STOP 1.0e+6

[[:SENSE]:OBWIDTH:PERCENT

Description	Sets or queries the percentage of signal power used when determining the occupied bandwidth (OBW).
Syntax	[[:SENSE]:OBWIDTH:PERCENT <percent>
Query Syntax	[[:SENSE]:OBWIDTH:PERCENT?
Parameter	<percent> <NRf>
Return parameter	<NR3>
Example	:OBW:PERC 33

[[:SENSE]:PASSFAIL:LINELIMIT:LOWER:CLEAR

Description	Clears all points of the lower limit line.
Syntax	[[:SENSE]:PASSFAIL:LINELIMIT:LOWER:CLEAR
Example	:PASSFAIL:LINEL:LOW:CLEAR

[[:SENSE]:PASSFAIL:LINELimit:LOWer:POINT<n>:DELeTe

Description	Deletes the specified point in the lower limit line.
Syntax	[[:SENSE]:PASSFAIL:LINELimit:LOWer:POINT<n>:DELeTe
Parameter	<n> <NR1> Point number
Example	:PASSFAIL:LINEL:LOW:POIN1:DEL

[[:SENSE]:PASSFAIL:LINELimit:LOWer:POINT<n>:X

Description	Sets or queries the frequency limit of the specified point in the lower limit line.
Syntax	[[:SENSE]:PASSFAIL:LINELimit:LOWer:POINT<n>:X <freq>
Query Syntax	[[:SENSE]:PASSFAIL:LINELimit:LOWer:POINT<n>:X?
Parameter	<n> <NR1> Point number <freq> <NRf> Frequency in Hz.
Return parameter	<NR3> Hz
Example	:PASSFAIL:LINEL:LOW:POIN1:X 2e+8

[[:SENSE]:PASSFAIL:LINELimit:LOWer:POINT<n>:Y

Description	Sets or queries the amplitude limit of the specified point in the lower limit line.
Syntax	[[:SENSE]:PASSFAIL:LINELimit:LOWer:POINT<n>:Y <ampl>
Query Syntax	[[:SENSE]:PASSFAIL:LINELimit:LOWer:POINT<n>:Y?
Parameter	<n> <NR1> Point number <ampl> Amplitude in dBm
Return parameter	<NR3> dBm
Example	:PASSFAIL:LINEL:LOW:POIN1:Y -20

[[:SENSE]:PASSFAIL:LINELimit:LOWer:STATE

Description	Turns the lower limit line on/off or queries its state.
Syntax	[[:SENSE]:PASSFAIL:LINELimit:LOWer:STATE {OFF ON 0 1}
Query Syntax	[[:SENSE]:PASSFAIL:LINELimit:LOWer:STATE?
Parameter	0 Turns the lower limit line off. 1 Turns the lower limit line on. OFF Turns the lower limit line off. ON Turns the lower limit line on.
Return parameter	0 The lower limit line is off. 1 The lower limit line is on.

Example :PASSFAIL:LINEL:LOW:STAT 1

[[:SENSE]:PASSFAIL:LINELimit:MARKer<n>:STATe?

Description	Returns the Pass/Fail judgment of limit line testing.
Query Syntax	[[:SENSE]:PASSFAIL:LINELimit:MARKer<n>:STATe?
Parameter	<n> <NR1> Marker number
Return parameter	0 Fail 1 Pass
Example	:PASSFAIL:LINEL:MARK1:STAT? returns 1

[[:SENSE]:PASSFAIL:LINELimit:STATe

Description	Turns limit line testing of pass/fail measurement function on/off.
Syntax	[[:SENSE]:PASSFAIL:LINELimit:STATe {OFF ON 0 1}
Query Syntax	[[:SENSE]:PASSFAIL:LINELimit:STATe?
Parameter	0 Turns limit line testing off. 1 Turns limit line testing on. OFF Turns limit line testing off. ON Turns limit line testing on.
Return parameter	0 Limit line testing is off. 1 Limit line testing is on.
Example	:PASSFAIL:LINEL:STAT 1

[[:SENSE]:PASSFAIL:LINELimit:UPper:CLEar

Description	Clears all points of the upper limit line.
Syntax	[[:SENSE]:PASSFAIL:LINELimit:UPper:CLEar
Example	:PASSFAIL:LINEL:UP:CLE

[[:SENSE]:PASSFAIL:LINELimit:UPper:POINT<n>:DELeTe

Description	Deletes the specified point in the upper limit line.
Syntax	[[:SENSE]:PASSFAIL:LINELimit:UPper:POINT<n>:DELeTe
Parameter	<n> <NR1> Point number

Example :PASSFAIL:LINEL:UP:POIN1:DEL

[[:SENSE]:PASSFAIL:LINELimit:UPper:POINT<n>:X

Description	Sets or queries the frequency limit of the specified point in the upper limit line.	
Syntax	[:SENSE]:PASSFAIL:LINELimit:UPper:POINT<n>:X <freq>	
Query Syntax	[:SENSE]:PASSFAIL:LINELimit:UPper:POINT<n>:X?	
Parameter	<n>	<NR1> Point number
	<freq>	<NRf> Frequency in Hz.
Return parameter	<NR3>	Hz
Example	:PASSFAIL:LINEL:UP:POIN1:X 9e+8	

[[:SENSE]:PASSFAIL:LINELimit:UPper:POINT<n>:Y

Description	Sets or queries the amplitude limit of the specified point in the upper limit line.	
Syntax	[:SENSE]:PASSFAIL:LINELimit:UPper:POINT<n>:Y <ampl>	
Query Syntax	[:SENSE]:PASSFAIL:LINELimit:UPper:POINT<n>:Y?	
Parameter	<n>	<NR1> Point number
	<ampl>	Amplitude in dBm
Return parameter	<NR3>	dBm
Example	:PASSFAIL:LINEL:UP:POIN1:Y -10	

[[:SENSE]:PASSFAIL:LINELimit:UPper:STATE

Description	Turns the upper limit line on/off or queries its state.	
Syntax	[:SENSE]:PASSFAIL:LINELimit:UPper:STATE {OFF ON 0 1}	
Query Syntax	[:SENSE]:PASSFAIL:LINELimit:UPper:STATE?	
Parameter	0	Turns the upper limit line off.
	1	Turns the upper limit line on.
	OFF	Turns the upper limit line off.
	ON	Turns the upper limit line on.
Return parameter	0	The upper limit line is off.
	1	The upper limit line is on.
Example	:PASSFAIL:LINEL:UPP:STAT 1	

[[:SENSE]:PASSFAIL:LINELimit:X:OFFSET

Description	Sets or queries the frequency offset (Shift X) of the upper and lower limit line.	
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Syntax	[[:SENSe]:PASSFAIL:LINELimit:X:OFFSET <freq>
Query Syntax	[[:SENSe]:PASSFAIL:LINELimit:X:OFFSET?
Parameter	<freq> <NRf> Frequency in Hz
Return parameter	<NR3> Hz
Example	:PASSFAIL:LINEL:X:OFFSET 1.0e+6

[[:SENSe]:PASSFAIL:LINELimit:Y:OFFSET

Description	Sets or queries the amplitude offset (Shift Y) of the upper and lower limit line.
Syntax	[[:SENSe]:PASSFAIL:LINELimit:Y:OFFSET <ampl>
Query Syntax	[[:SENSe]:PASSFAIL:LINELimit:Y:OFFSET?
Parameter	<ampl> <NRf> Amplitude in dBm
Return parameter	<NR3> dBm
Example	:PASSFAIL:LINEL:Y:OFFSET -15

[[:SENSe]:PASSFAIL:WINdow:AMPI:LOWer

Description	Sets or queries the lower amplitude of amplitude line in window testing.
Syntax	[[:SENSe]:PASSFAIL:WINdow:AMPI:LOWer <ampl>
Query Syntax	[[:SENSe]:PASSFAIL:WINdow:AMPI:LOWer?
Parameter	<ampl> Amplitude in dBm
Return parameter	<NR3> dBm
Example	:PASSFAIL:WIN:AMPI:LOW -20

[[:SENSe]:PASSFAIL:WINdow:AMPI:UPper

Description	Sets or queries the upper amplitude of amplitude line in window testing.
Syntax	[[:SENSe]:PASSFAIL:WINdow:AMPI:UPper <ampl>
Query Syntax	[[:SENSe]:PASSFAIL:WINdow:AMPI:UPper?
Parameter	<ampl> Amplitude in dBm
Return parameter	<NR3> dBm
Example	:PASSFAIL:WIN:AMPI:UP -10

[[:SENSe]:PASSFAIL:WINdow:AMPt:STATe

Description	Turns the amplitude line of window testing on/off or queries its state.
Syntax	[[:SENSe]:PASSFAIL:WINdow:AMPt:STATe {OFF ON 0 1}
Query Syntax	[[:SENSe]:PASSFAIL:WINdow:AMPt:STATe?

Parameter	0	Turns the amplitude line off.
	1	Turns the amplitude line on.
	OFF	Turns the amplitude line off.
	ON	Turns the amplitude line on.
Return parameter	0	The amplitude line is off.
	1	The amplitude line is on.
Example	:PASSFAIL:WIN:AMP:STAT 1	

[[:SENSe]:PASSFAIL:WINDow:FREQuency:END

Description	Sets or queries the stop frequency of frequency line in window testing.	
Syntax	[:SENSe]:PASSFAIL:WINDow:FREQuency:END<freq>	
Query Syntax	[:SENSe]:PASSFAIL:WINDow:FREQuency:END?	
Parameter	<freq>	<NRf> Frequency in Hz.
Return parameter	<NR3>	Hz
Example	:PASSFAIL:WIN:FREQ:END 8e+8	

[[:SENSe]:PASSFAIL:WINDow:FREQuency:START

Description	Sets or queries the start frequency of frequency line in window testing.	
Syntax	[:SENSe]:PASSFAIL:WINDow:FREQuency:START <freq>	
Query Syntax	[:SENSe]:PASSFAIL:WINDow:FREQuency:START?	
Parameter	<freq>	<NRf> Frequency in Hz.
Return parameter	<NR3>	Hz
Example	:PASSFAIL:WIN:FREQ:STAR 6e+8	

[[:SENSe]:PASSFAIL:WINDow:FREQuency:STATE

Description	Turns the frequency line of window testing on/off or queries its state.	
Syntax	[:SENSe]:PASSFAIL:WINDow:FREQuency:STATE {OFF ON 0 1}	
Query Syntax	[:SENSe]:PASSFAIL:WINDow:FREQuency:STATE?	
Parameter	0	Turns the frequency line off.
	1	Turns the frequency line on.
	OFF	Turns the frequency line off.
	ON	Turns the frequency line on.
Return parameter	0	The frequency line is off.
	1	The frequency line is on.
Example	:PASSFAIL:WIN:FREQ:STAT 1	

[[:SENSE]:PASSFAIL:WINDOW:MARKer<n>:STATe?

Description	Returns the Pass/Fail judgment of window testing.
Query Syntax	[[:SENSE]:PASSFAIL:WINDOW:MARKer<n>:STATe?
Parameter	<n> <NR1> Marker number
Return parameter	0 Fail 1 Pass
Example	:PASSFAIL:WIN:MARK1:STAT? returns 1

[[:SENSE]:PASSFAIL:WINDOW:STATe

Description	Turns window testing of pass/fail measurement function on/off.
Syntax	[[:SENSE]:PASSFAIL:WINDOW:STATe {OFF ON 0 1}
Query Syntax	[[:SENSE]:PASSFAIL:WINDOW:STATe?
Parameter	0 Turns window testing off. 1 Turns window testing on. OFF Turns window testing off. ON Turns window testing on.
Return parameter	0 Window testing is off. 1 Window testing is on.
Example	:PASSFAIL:WIN:STAT 1

[[:SENSE]:PASSFAIL:WINDOW:SWEEP:STATe

Description	Turns window sweep on/off or queries its state. When the window sweep is on, only the window formed by the intersection of the amplitude line and the frequency line is swept, the peripheral stops sweeping; the full frequency is swept when it is off.
Syntax	[[:SENSE]:PASSFAIL:WINDOW:SWEEP:STATe {OFF ON 0 1}
Query Syntax	[[:SENSE]:PASSFAIL:WINDOW:SWEEP:STATe?
Parameter	0 Turns window sweep off. 1 Turns window sweep on. OFF Turns window sweep off. ON Turns window sweep on.
Return parameter	0 Window sweep is off. 1 Window sweep is on.
Example	:PASSFAIL:WIN:SWEEP:STAT 1

[[:SENSE]:POWER[:RF]:ATTenuation

Description	Sets or queries the input attenuation.
Syntax	[[:SENSE]:POWER[:RF]:ATTenuation <rel_ampl>
Query Syntax	[[:SENSE]:POWER[:RF]:ATTenuation?
Parameter/ Return parameter	<rel_ampl> <NR1> 0 dB to 40 dB
Example	:POW:ATT 10 dB

[[:SENSE]:POWER[:RF]:ATTenuation:AUTO

Description	Sets or queries whether the automatic input attenuation is on/off.
Syntax	[[:SENSE]:POWER[:RF]:ATTenuation:AUTO {OFF ON 0 1}
Query Syntax	[[:SENSE]:POWER[:RF]:ATTenuation:AUTO?
Parameter	0 Turns automatic input attenuation off. 1 Turns automatic input attenuation on. OFF Turns automatic input attenuation off. ON Turns automatic input attenuation on.
Return parameter	0 Automatic input attenuation is off. 1 Automatic input attenuation is on.
Example	:POW:ATT:AUTO ON

[[:SENSE]:POWER[:RF]:GAIN[:STATe]:AUTO

Description	Turns the preamplifier on/off or queries its state.
Syntax	[[:SENSE]:POWER[:RF]:GAIN[:STATe]:AUTO {OFF ON 0 1}
Query Syntax	[[:SENSE]:POWER[:RF]:GAIN[:STATe]:AUTO?
Parameter	0 Turns the preamplifier off. 1 Turns the preamplifier on. OFF Turns the preamplifier off. ON Turns the preamplifier on.
Return parameter	0 The preamplifier is off. 1 The preamplifier is on.
Example	:POW:GAIN:AUTO ON

[[:SENSE]:SWEep:POINTs

Description	Sets or queries the sweep points.
Syntax	[[:SENSE]:SWEep:POINTs <number>

Query Syntax	[[:SENSE]:SWEep:POINts?
Parameter	<number> <NR1>
Return parameter	<NR1>
Example	:SWEep:POIN 100

[[:SENSE]:SWEep:TIME

Description	Sets or queries the sweep time.
Syntax	[[:SENSE]:SWEep:TIME <time>
Query Syntax	[[:SENSE]:SWEep:TIME?
Parameter	<time> Sweep time in s, ms, us, ns. The default unit is ns.
Return parameter	<time> Sweep time in millisecond.
Example	:SWE:TIME 60 ms

[[:SENSE]:SWEep:TIME:AUTO

Description	Sets the Sweep time setting to auto (on) or manual (off).
Syntax	[[:SENSE]:SWEep:TIME:AUTO {OFF ON 0 1}
Query Syntax	[[:SENSE]:SWEep:TIME:AUTO?
Parameter	0 Sets sweep time to manual (off). 1 Sets sweep time to auto (on). OFF Sets sweep time to manual (off). ON Sets sweep time to auto (on).
Return parameter	0 Sweep time is set to manual. 1 Sweep time is set to automatic.
Example	:SWE:TIME:AUTO 0

SOURce Commands

:SOURce:POWer:TRACk[:POWer]

Description	Sets or queries the tracking generator output power level.
Syntax	:SOURce:POWer:TRACk[:POWer] <ampl>
Query Syntax	:SOURce:POWer:TRACk[:POWer]?
Parameter	<ampl> <NRf> Power or voltage, -30 dBm to 0 dBm
Return parameter	<NR3>
Example	:SOUR:POW:TRAC -5

SYSTEM Commands

:SYSTEM:COMMunicate:LAN:DHCP

Description	Turns the DHCP on/off or queries its state.	
Syntax	:SYSTEM:COMMunicate:LAN:DHCP {OFF ON 0 1}	
Query Syntax	:SYSTEM:COMMunicate:LAN:DHCP?	
Parameter	0	Turns the DHCP off.
	1	Turns the DHCP on.
	OFF	Turns the DHCP off.
	ON	Turns the DHCP on.
Return parameter	0	The DHCP is off.
	1	The DHCP is on.
Example	:SYST:COMM:LAN:DHCP 0	

:SYSTEM:COMMunicate:LAN:GATE

Description	Sets or queries the gateway address. Gate (gateway address) should match with IP address.	
Syntax	:SYSTEM:COMMunicate:LAN:GATE <gate>	
Query Syntax	:SYSTEM:COMMunicate:LAN:GATE?	
Parameter	<gate>	<String>
Return parameter	<String>	
Example	:SYST:COMM:LAN:GATE 192.168.1.1	

:SYSTEM:COMMunicate:LAN:IP:ADDRESS

Description	Sets or queries the device IP address.	
Syntax	:SYSTEM:COMMunicate:LAN:IP:ADDRESS <ip address>	
Query Syntax	:SYSTEM:COMMunicate:LAN:IP:ADDRESS?	
Parameter	<ip address>	<String>
Return parameter	<String>	
Example	:SYST:COMM:LAN:IP:ADDR 192.168.1.72	

:SYSTEM:COMMunicate:LAN:MASK

Description	Sets or queries the device subnet mask address. Mask (subnet mask address)	
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	should match with IP address.
Syntax	:SYSTem:COMMunicate:LAN:MASK <mask>
Query Syntax	:SYSTem:COMMunicate:LAN:MASK?
Parameter	<mask> <String>
Return parameter	<String>
Example	:SYST:COMM:LAN:MASK 255.255.255.0

:SYSTem:CONFigure:FIRMwareupdate

Description	Updates the system with new firmware from files located on an external USB drive.
Syntax	:SYSTem:CONFigure:FIRMwareupdate
Example	:SYST:CONF:FIRM

:SYSTem:CONFigure:information?

Description	Queries the system information, such as the serial number, hardware version, and temperature of the instrument.
Query Syntax	:SYSTem:CONFigure:INFomation?
Return parameter	<String> Returns the system information as a string in the following format: Serial Number = GSP XXXXXX, Hardware Version = X.X.X.X, temperature = X°C
Example	:SYSTem:CONFigure:INFomation? returns Serial Number = GSP183201, Hardware Version = 3.0.0.0, temperature = 52.50°C

:SYSTem:DATE

Description	Sets or queries the system date.
Syntax	:SYSTem:DATE <year>,<month>,<day>
Query Syntax	:SYSTem:DATE?
Parameter	<year> <NR1> Year, a 4-digit integer 2000 to 2100.
Return parameter	<month> <NR1> Month, a 2-digit integer 01 to 12. <day> <NR1> Day, a 2-digit integer 01 to 31.
Example	:SYST:DATE 2011,07,01

:SYSTem:LANGuage

Description	Sets or queries the language that the instrument uses to display on the screen.	
Syntax	:SYSTem:LANGuage {ENGLish CHINese}	
Query Syntax	:SYSTem:LANGuage?	
Parameter/ Return parameter	ENGLish	The instrument displays in English.
	CHINese	The instrument displays in Chinese.
Example	:SYST:LANG ENGL	

:SYSTem:PON:TYPE

Description	Sets the power-on type between user-defined and factory default.	
Syntax	:SYSTem:PON:TYPE {FACTory USER}	
Query Syntax	:SYSTem:PON:TYPE?	
Parameter/ Return parameter	FACTory	Factory default
	USER	User defined preset
Example	:SYST:PON:TYPE USER	

:SYSTem:PRESet:TYPE

Description	Sets the preset type between user-defined and factory default.	
Syntax	:SYSTem:PRESet:TYPE {FACTory USER}	
Query Syntax	:SYSTem:PRESet:TYPE?	
Parameter/ Return parameter	FACTory	Factory default
	USER	User defined preset
Example	:SYST:PRES:TYPE USER	

:SYSTem:SPEaker:VOLume

Description	Sets or queries the volume setting for the demodulation function.	
Syntax	:SYSTem:SPEaker:VOLume <integer>	
Query Syntax	:SYSTem:SPEaker:VOLume?	
Parameter/ Return parameter	<integer>	<NR1> 0 to 100
Example	:SYST:SPE:VOL 50	

:SYSTem:TIME

Description	Sets or queries the system time.	
Syntax	:SYSTem:TIME <hour>,<minute>,<second>	
Query Syntax	:SYSTem:TIME?	
Parameter	<hour>	<NR1> Hour, a 2-digit integer 00 to 23.
Return parameter	<minute>	<NR1> Minute, a 2-digit integer 00 to 59.
	<second>	<NR1> Second, a 2-digit integer 00 to 59.
Example	:SYST:TIME 19,05,30	

TRACe Commands

:TRACe[:DATA]?

Description	Returns the trace data for the selected trace.	
Query Syntax	:TRACe[:DATA]? TRACE1 TRACE2 TRACE3 TRACE4 TRACE5	
Parameter	TRACE1 TRACE2 TRACE3 TRACE4 TRACE5	The selected trace.
Return parameter	<data>	Start with #9, the following 9 digits specify the length of the data. Trace data is separated by a comma "," and each data length is fixed at 7 bits.
Example	:TRAC? TRACE1 returns #9000004807,64.7301,-68.163, ..., -36.195,-57.951	

:TRACe:SOCKdata?

Description	Returns the trace data for the selected trace as a stream of bytes.	
Query Syntax	:TRACe[:DATA]? TRACE1 TRACE2 TRACE3 TRACE4 TRACE5	
Parameter	TRACE1 TRACE2 TRACE3 TRACE4 TRACE5	The selected trace.
Return parameter	<data>	Byte stream of trace data, start with #9, the following 9 digits specify the length of the data in bytes; and each data length is fixed at 4 bytes.
Example	:TRAC:SOCK? TRACE1 returns #9000002406\C1\13\F5z\C1\13\EF\F0\C1\14\18\B5\C1\13\FD\9E\C1\13\F7(\C1\14\04L\C1\13\F1\AD\C1\14\15\81\C1\13\FA\17\C1\13\F9\D1\C1\13\FA\F5\C1\13\F5\BF\...	

:TRACe<n>:MODE

Description	Sets or queries the operation mode of the selected trace.
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Syntax	:TRACe<n>:MODE {WRITe MAXHold MINHold BLANK VIEW}	
Query Syntax	:TRACe<n>:MODE?	
Parameter/ Return parameter	<n>	<NR1> Trace number 1 to 5.
	WRITe	Clear and Write
	MAXHold	Hold the maximum points from each sweep
	MINHold	Hold the minimum points from each sweep
	BLANK	Clear the trace
	VIEW	Hold the last trace
Example	:TRAC1:MODE VIEW	

Trigger Commands

:TRIGger:SEQuence:SOURce

Description	Sets or queries the triggering source.	
Syntax	:TRIGger:SEQuence:SOURce {RUN VIDeo POSitive NEGative}	
Query Syntax	:TRIGger:SEQuence:SOURce?	
Parameter/ Return parameter	RUN	Run trigger
	VIDeo	Video trigger
	POSitive	Positive trigger
	NEGative	Negative trigger
Example	:TRIG:SEQ:SOUR RUN	

:TRIGger:SEQuence:SOURce:VIDeo:POWer

Description	Sets or queries the video trigger power.	
Syntax	:TRIGger:SEQuence:SOURce:VIDeo:POWer <ampl>	
Query Syntax	:TRIGger:SEQuence:SOURce:VIDeo:POWer?	
Parameter	<ampl>	<NRf> power
Return parameter	<NR3>	
Example	:TRIG:SEQ:SOUR:VID:POW 10	

UDISK Commands

:UDISK:STORe:SCReen

Description	Saves the current screen-shot to a folder named "spectrum" (created automatically) in USB storage device, the file is named based on date/time, the format is png.
Syntax	:UDISK:STORe:SCReen
Example	:UDIS:STOR:SCR

:UDISK:STORe:TRACe

Description	Saves the trace data to a folder named "spectrum" (created automatically) in USB storage device, the file is named based on date/time, the format is cvs.
Syntax	:UDISK:STORe:TRACe
Example	:UDIS:STOR:TRAC

UNIT Commands

:UNIT:POWer

Description	Sets the amplitude unit.	
Syntax	:UNIT:POWer {DBM DBUW DBPW DBMV DBUV W V}	
Query Syntax	:UNIT:POWer?	
Parameter/ Return parameter	DBM	Decibels
	DBUW	Decibels relative to one microwatt
	DBPW	Decibels relative to one picowatt
	DBMV	Decibels relative to one millivolt
	DBUV	Decibels relative to one microvolt
	W	Watt
	V	Volt
Example	:UNIT:POW DBM	