

**Manual operation:** See ["Mode - Import/Export Pulse Train Files"](#) on page 238

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**[[:SOURce<hw>]:PULM:TRAI:n:DEXChange:SElect <Filename>**

Selects the pulse train list to be imported or exported.

The pulse train files are stored with the fixed file extensions `*.pulstrn` in a directory of the user's choice. The directory applicable to the commands is defined with the command `MMEMoRY:CDIR`.

**Parameters:**

<Filename>                      string

**Example:**

`PULM:TRA:DEXC:MODE IMP`

selects that ASCII files with ontime/offtime/repetition values are imported and transferred into pulse train lists.

`MMEM:CDIR '/var/user/Lists/import'`

selects the directory for the ASCII files with ontime/offtime/repetition values.

`PULM:TRA:DEXC:AFIL:SEL 'train.csv'`

selects that ASCII file `train.csv` is imported.

`PULM:TRA:DEXC:SEL 'train_imp'`

selects that the ASCII file `train.csv` is imported into pulse train list `train_imp`.

**Options:** R&S SMB-K27 (Pulse Train)

**Manual operation:** See ["Select Destination / Source - Import/Export Pulse Train Files"](#) on page 239

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**[[:SOURce<hw>]:PULM:WIDTh <Width>**

Sets the width of the generated pulse. The width determines the pulse length. The pulse width must be at least 20ns less than the set pulse period.

**Parameters:**

<Width>                      float  
                                  Range:        10 ns to 100 s  
                                  Increment: 10 ns  
                                  \*RST:        2 us

**Example:**

`PULM:WIDT 33 us`

sets a width of 33 us for the pulse.

**Options:** R&S SMB-K23 (Pulse Generator)

**Manual operation:** See ["Pulse Width - Pulse Generator"](#) on page 233

### 6.13.14 SOURce:ROSCillator Subsystem

This subsystem contains the commands for setting the external and internal reference frequency.



The settings of the reference oscillator are not affected by an instrument reset (\*RST on page 286). They are only reset to factory state by the factory-preset (:SYSTEM:FPRReset on page 289).

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### [SOURce]:ROSCillator:EXTernal:FREQuency <Frequency>

Selects the external reference frequency.

**Note:** The installed hardware determines the available settings. Use the [Hardware Config](#) dialog to check the hardware the instrument is equipped with.

For information on the required hardware revision, refer to the release notes.

#### Parameters:

<Frequency>      5MHZ | 10MHZ  
 \*RST:            n.a. (factory preset: 10MHZ)

#### Example:

ROSC:SOUR EXT  
 Selects the external source. The reference must be input at the REF IN input.  
 ROSC:EXT:FREQ 10MHz  
 Selects 10 MHz external reference frequency.

**Manual operation:** See ["External Reference Frequency"](#) on page 145

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### [SOURce]:ROSCillator:EXTernal:RFOff[:STATe] <State>

Activates that RF output is automatically switched off, when in external source mode no reference signal is supplied.

This setting ensures that no improper RF signal due to the missing external reference signal is output and used for measurements.

In addition to the error message "Ext Ref missing", the instrument generates the message "RF output deactivated".

#### Parameters:

<State>            0 | 1 | OFF | ON  
 \*RST:            n.a. (factory preset: 0)

#### Example:

ROSC:SOUR EXT  
 Selects the external source. The reference must be input at the REF IN input.

#### Example:

ROSC:EXT:RFOF:STAT ON  
 If the external signal is missing, no RF signal is output.

**Manual operation:** See ["Deactivate RF Output \(if external reference is missing\)"](#) on page 145

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**[[:SOURce]:ROSCillator:EXTernal:SBANDwidth <SBandwidth>**

Sets the synchronization bandwidth for an external reference signal.

**Parameters:**

<SBandwidth>

WIDE | NARRow

**NARRow**

The synchronization bandwidth is approx. 50 Hz.

**WIDE**

The synchronization bandwidth is approx. 350 Hz.

\*RST: n.a. (factory preset)

**Example:**

ROSC:SOUR EXT

Selects the external source.

ROSC:EXT:FREQ 10 MHz

Informs the instrument that the external reference has a frequency of 10 MHz.

ROSC:EXT:SBAN WID

Selects wideband setting for synchronization bandwidth.

**Manual operation:** See ["Synchronization Bandwidth"](#) on page 145

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**[[:SOURce]:ROSCillator[:INTernal]:ADJust:VALue <Value>**

Specifies the frequency correction value (adjustment value).

**Parameters:**

<Value>

integer

Range: 0 to maximum value (see data sheet)

Increment: see data sheet

\*RST: ---

**Example:**

ROSC:ADJ:VAL 456

Sets the adjustment value to 456.

**Manual operation:** See ["Adjustment DAC Value"](#) on page 146

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**[[:SOURce]:ROSCillator[:INTernal]:ADJust[:STATe] <State>**

Determines whether the calibrated (OFF) or a user-defined (ON) adjustment value is used for fine adjustment of the frequency.

If user-defined values are used, the instrument is no longer in the calibrated state. However, the calibration value is not changed and the instrument resumes the calibrated state after sending the com-

mand :SOURce:ROSCillator:INTernal:ADJust:STATe OFF.