

3.4.15.3 :BUS<n>:LIN:STANdard

Syntax

```
:BUS<n>:LIN:STANdard <value>
```

```
:BUS<n>:LIN:STANdard?
```

Description

Sets or queries the version of LIN bus.

Parameter

Name	Type	Range	Default
<n>	Discrete	{1 2 3 4}	-
<value>	Discrete	{V1X V2X MIXed}	MIXed

Remarks

N/A

Return Format

The query returns V1X, V2X, or MIX.

Example

```
:BUS1:LIN:STANdard V2X          /*Sets the LIN bus version to
V2X.*/
:BUS1:LIN:STANdard?             /*The query returns V2X.*/
```

3.5 :BODEplot Commands

The **:BODEplot** commands are used to execute the bode-related settings and operations.

Bode plot is a way of graphically displaying the frequency response of a system. Through the analysis on the system's gain and phase margins, you can determine the stability of the system.

With the built-in signal generator module, the oscilloscope generates the sweep signal of a specified frequency range and outputs to the switch power supply circuit under test. Then, the oscilloscope draws a Bode plot displaying the variation of phase and gain with different frequencies.

NOTE

The commands are only available for DHO914S and DHO924S.



3.5.1 :BODEplot:ENABLE

Syntax

```
:BODEplot:ENABLE <bool>
```

```
:BODEplot:ENABLE?
```

Description

Sets or queries the on/off status of the bode plot.

Parameter

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

Remarks

N/A

Return Format

The query returns 1 or 0.

Examples

```
:BODEplot:ENABLE ON /*Enables the bode plot.*/
:BODEplot:ENABLE? /*The query returns 1.*/
```

3.5.2 :BODEplot:RUNStop

Syntax

```
:BODEplot:RUNStop <bool>
```

```
:BODEplot:RUNStop?
```

Description

Sets or queries the run/stops status of the bode plot.

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

```
:BODEplot:RUNStop ON /*Starts the bode plot drawing.*/
:BODEplot:RUNStop? /*The query returns 1.*/
```

3.5.3 :BODEplot:SWEeptype**Syntax**

```
:BODEplot:SWEeptype <type>
```

```
:BODEplot:SWEeptype?
```

Description

Sets or queries the sweep type of the bode plot.

Parameter

Name	Type	Range	Default
<type>	Discrete	{LOG LINE}	LOG

Remarks

- **LOG:** logarithmic sweep, indicating that the frequency of the swept sine wave varies logarithmically with the time.
- **LINE:** linear sweep, indicating that the frequency of the swept sine wave varies linearly with the time.

Return Format

The query returns LOG or LINE.

Example

```
:BODEplot:SWEeptype LINE /*Sets the sweep type of the bode plot
to Linear.*/
:BODEplot:SWEeptype? /*The query returns LINE.*/
```

3.5.4 :BODEplot:REF:IN**Syntax**

```
:BODEplot:REF:IN <source>
```

```
:BODEplot:REF:IN?
```

Description

Sets or queries the input source of the bode plot.

Parameter

Name	Type	Range	Default
<source>	Discrete	{CHANnel1 CHANnel2 CHANnel3 CHANnel4}	CHANnel1

Remarks

N/A

Return Format

The query returns CHANnel1, CHANnel2, CHANnel3, or CHANnel4.

Example

```
:BODEplot:REF:IN CHANnel1 /*Sets the input source of the bode plot
to CH1.*/
:BODEplot:REF:IN? /*The query returns CHANnel1.*/
```

3.5.5 :BODEplot:REF:OUT

Syntax

```
:BODEplot:REF:OUT <source>
```

```
:BODEplot:REF:OUT?
```

Description

Sets or queries the output source of the bode plot.

Parameter

Name	Type	Range	Default
<source>	Discrete	{CHANnel1 CHANnel2 CHANnel3 CHANnel4}	CHANnel1

Remarks

N/A

Return Format

The query returns CHANnel1, CHANnel2, CHANnel3, or CHANnel4.

Example

```
:BODEplot:REF:OUT CHANnel1 /*Sets the output source of the bode
plot to CH1.*/
:BODEplot:REF:OUT? /*The query returns CHANnel1.*/
```

3.5.6 :BODEplot:START

Syntax

`:BODEplot:START <freq>`

`:BODEplot:START?`

Description

Sets or queries the start frequency of the sweep signal for the Bode plot function. The default unit is Hz.

Parameter

Name	Type	Range	Default
<freq>	Real	10 Hz to 24.99 MHz	10 Hz

Remarks

The "Start Frequency" must be smaller than the "Stop Frequency". You can use `:BODEplot:STOP` to set or query the stop frequency of the sweep signal.

Return Format

The query returns the start frequency in scientific notation. The unit is Hz.

Example

```
:BODEplot:START 100 /*Sets the start frequency to 100 Hz.*/
:BODEplot:START? /*The query returns 1.000000E+2.*/
```

3.5.7 :BODEplot:STOP

Syntax

`:BODEplot:STOP <freq>`

`:BODEplot:STOP?`

Description

Sets or queries the stop frequency of the sweep signal for the Bode plot function. The default unit is Hz.

Parameter

Name	Type	Range	Default
<freq>	Real	100 Hz to 25 MHz	100 Hz

Remarks

The "Stop Frequency" should be greater than the "Start Frequency". You can use `:BODEplot:START` to set or query the start frequency of the sweep signal.

Return Format

The query returns the stop frequency in scientific notation. The unit is Hz.

Example

```
:BODEplot:STOP 500 /*Sets the stop frequency to 500 Hz.*/
:BODEplot:STOP? /*The query returns 5.000000E+2.*/
```

3.5.8 :BODEplot:POINts

Syntax

```
:BODEplot:POINts <num>
```

```
:BODEplot:POINts?
```

Description

Sets or queries the number of points per decade.

Parameter

Name	Type	Range	Default
<num>	Integer	10 to 300	10

Remarks

N/A

Return Format

The query returns an integer.

Example

```
:WAVEform:POINts 20 /*Sets the number of points per decade to 20.*/
:WAVEform:POINts? /*The query returns 20.*/
```

3.5.9 :BODEplot:VOLTage

Syntax

```
:BODEplot:VOLTage <range>,<amp>
```

```
:BODEplot:VOLTage? <range>
```

Description

Sets or queries the voltage amplitude of the sweep signal within the specified frequency range for the Bode plot function. The default unit is V for voltage and Hz for frequency.