



PE0312-75 Port Extender Specifications



Frequency range	3 MHz to 3 GHz
Recommended pairing	SC7540

Hardware Specifications

PE0312-75

General Data¹

Impedance	75 Ohm
Frequency range	3 MHz to 3 GHz
Configuration	2X12 full crossbar, bidirectional
Switches	Solid-state technology
Control	USB 2.0, ethernet
Power over ethernet	Supported
Insertion loss (A or B port to any TEST port)	
3 MHz to 1300 MHz	4.0 dB
1300 MHz to 2150 MHz	4.5 dB
2150 MHz to 3000 MHz	5.0 dB
Return loss (TEST ports in ON state):	
3 MHz to 1300 MHz	12 dB
1300 MHz to 3000 MHz	10 dB
Return loss (A or B port)	
3 MHz to 3000 MHz	12 dB
Isolation (between A and B ports)	85 dB (95 dB typ.)

[1] All specifications subject to change without notice.

[2] Switching can be controlled manually, via trigger signals in fast switching mode (table mode), or through automation commands.

Ports

INPUT ports	
Number of ports	2
Designation	Port A, Port B
Connector type	Type N (75 Ohm), female
TEST ports	
Number of ports	12
Designation	Port 1 - Port 12
Connector type	Type N (75 Ohm), female
Damage level	+26 dBm
Damage DC voltage	35 V

Trigger Input

Port	Trigger IN ³ , Trigger Reset ⁴
Min pulse width	200 ns
Input level	
Low threshold voltage	1.1 V
High threshold voltage	2.6 V
Input level range	0 V to 5 V
Polarity	positive or negative
Input impedance	≥2 kOhm
Connector type	BNC, female

[3] In fast switching mode, each pulse received at the trigger input port initiates switching to the next predefined state. The switching limits are provided in the switching parameters section.

[4] Trigger reset returns the trigger-controlled switching sequence to its initial state.

Trigger Output

Port	Trigger OUT ⁵
Pulse width	1 μs
Maximum output current	10 mA
Output level	
Low level voltage	0.0 V to 0.6 V
High level voltage	3.0 V to 3.8 V
Polarity	positive or negative
Connector type	BNC, female

[5] When enabled, the trigger output generates a pulse at the end of the switching sequence.

Switching Parameters

Switching time	5 μs
Switching frequency	25 kHz max

System & Power

Interface	USB 2.0, Ethernet: 10/100BASE-TX
Connector type	
USB	Type C
Ethernet	RJ-45
Power consumption (main outlet)	3 W (typ.)

Dimensions

Length	422 mm
Width	414 mm
Height	99 mm
Weight	6.5 kg (229 oz)

Environmental Specifications

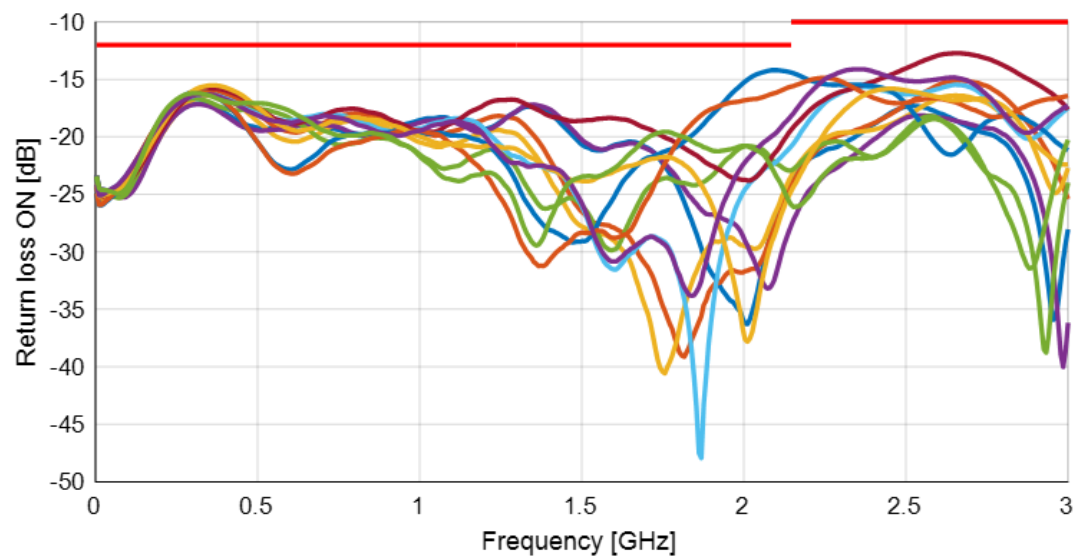
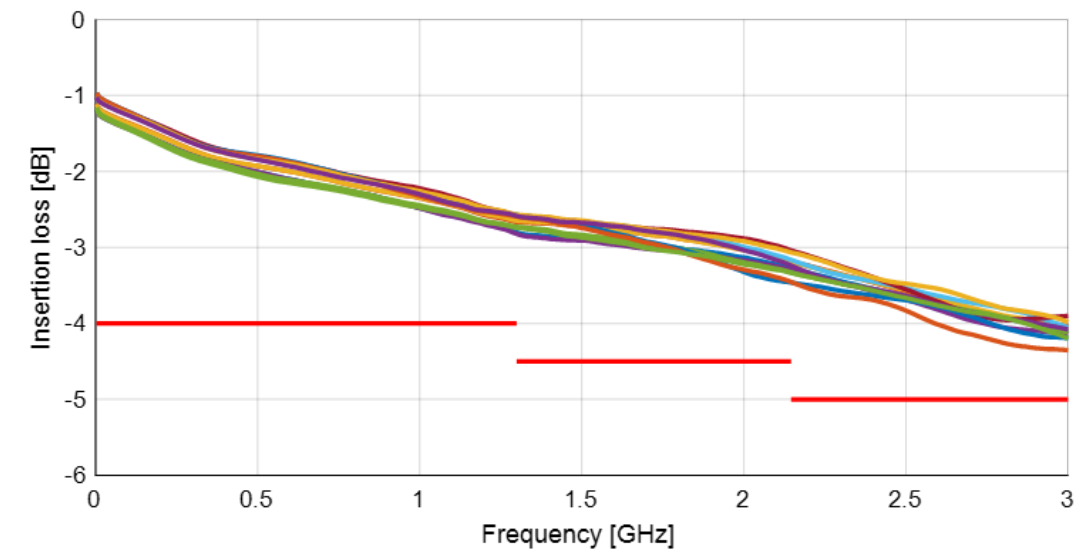
Operating condition	
Temperature	+5 °C to +40 °C (41 °F to 104 °F)
Humidity	90 % at 25 °C (77 °F)
Storage	
Temperature	0 °C to +40 °C (32 °F to 104 °F)
Humidity	80 % at 35 °C (95 °F)
Non-operating temperature ⁶	-50 °C to +70 °C (-58 °F to 158 °F)
Atmospheric pressure	70.0 kPa to 106.7 kPa

[6] Non-operating temperature specifies the allowable environmental conditions for transporting the instrument. Storage conditions are listed separately.

VNA Compatibility

Recommended pairing	SC7540
Compatible analyzers	CMT VNAs with 50 to 75 Ohm adapters

Insertion and Return Loss Plots



TEST ports in ON state. Switching Port A or Port B to all TEST ports. Typical specifications.

