Ultra-Broadband DC Block

PSPL5509 Datasheet

The PSPL5509 DC Block is an ultra-broadband inner conductor DC block with a flat frequency response over many decades up to 50 GHz. It is available in a choice of 2.92 mm or 2.4 mm connectors. The PSPL5509 with option 16V optimizes low frequency performance, the PSPL5509 with option 50V optimizes return loss

Key Performance Specifications

- From 7 kHz to 50 GHz Bandwidth
- 5 ps Risetime
- 1 dB Insertion Loss to 40 GHz
- Available with 16 VDC or 50 VDC

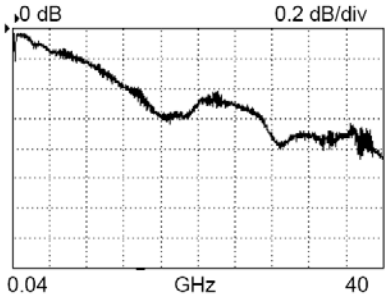
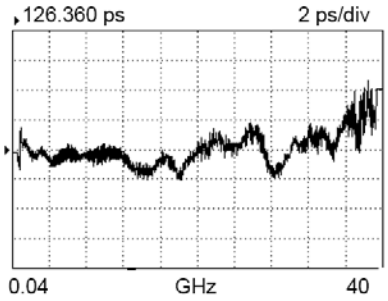
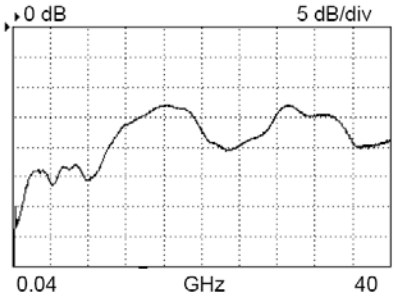
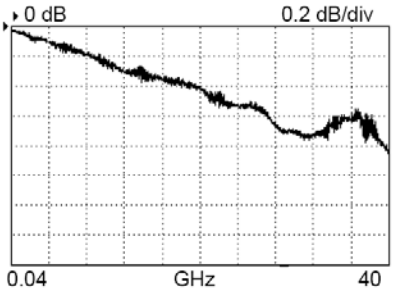
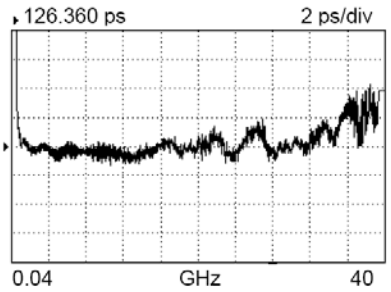
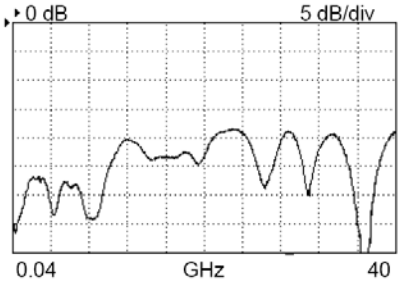
Specifications

Parameter	PSPL5509 option 16V	PSPL5509 option 50V
Capacitance	0.02 μF	500 pF
Voltage	16 V maximum	50 V maximum
Insertion Loss (all connector types) (2.4 mm only)	<1 dB typical, f < 40 GHz 2 dB max. at 40 GHz 3 dB max. at 50 GHz	
Low Frequency (-3 dB)	7 kHz	3 MHz
Risetime (10%-90%)	5.1 ps	
Delay	126 ps	
Impedance	50 Ω	
Return Loss	See Typical Performance	
Dimensions 2.92 mm 2.4 mm	35.1 x 15.9 x 7.9 mm 36.7 x 15.9 x 7.9 mm	
Warranty	1 Year	

Note: Parameters listed are typical values. Max/min limits for insertion loss are guaranteed.

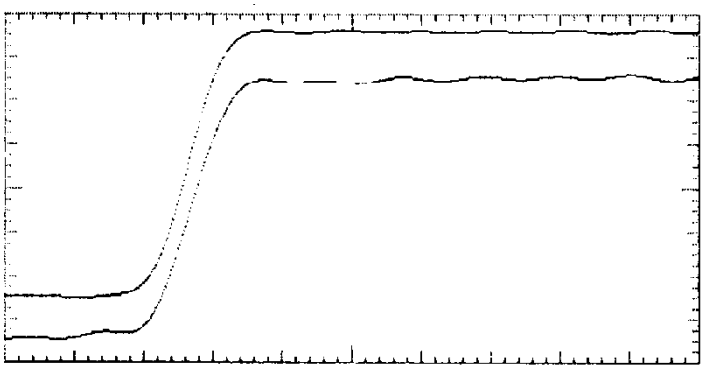
[2] Frequency response measured using a Wiltron 37369A 40 MHz - 40 GHz network analyzer.

Typical Performance

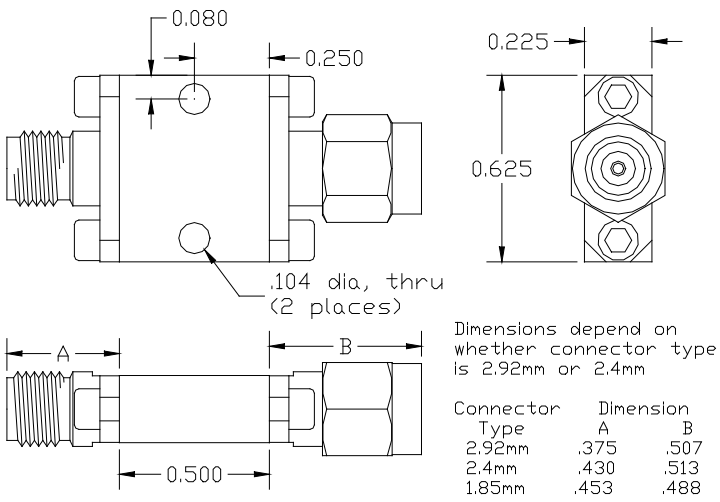
	Insertion Loss 0.2 dB/div, 40 MHz to 50GHz, 4 GHz/div	Group Delay 0.2 dB/div, 40 MHz to 50GHz, 4 GHz/div	Return Loss 0.2 dB/div, 40 MHz to 50GHz, 4 GHz/div
PSPL5509 Option 16V			
PSPL5509 Option 50V			

Step Response, 10 ps/div

Note: Step response measured using a PSPL Model 4015C 15 ps pulse generator.



PSPL5509 Mechanical dimensions



Ordering information

Model	Description
PSPL5509	Ultra-Broadband DC Block

Options

- Opt. 240JP Female 2.4 mm connectors input port, Male 2.4 mm connector on output port
- Opt. 292JP Female 2.92 mm connectors input port, Male 2.92 mm connector on output port
- Opt. 16V Maximum Voltage 16V
- Opt. 50V Maximum Voltage 50V

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