

18 GHz Bias Tee

PSPL5550B Datasheet

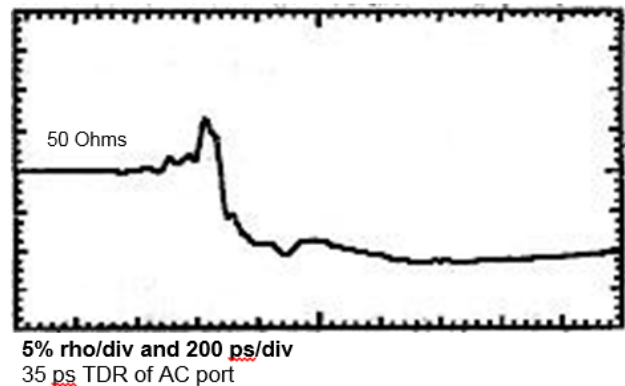
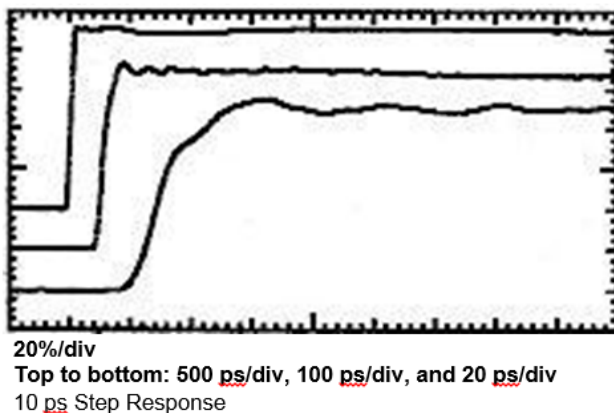
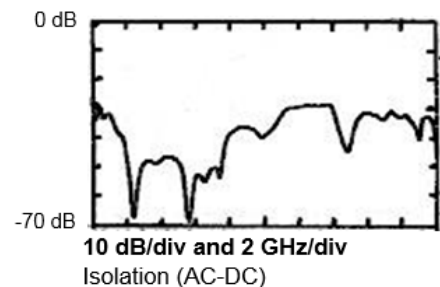
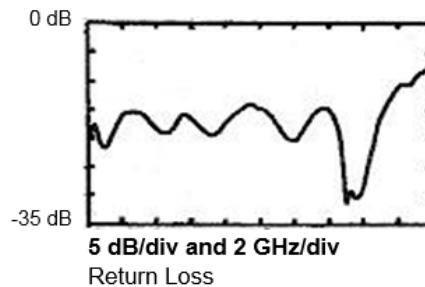
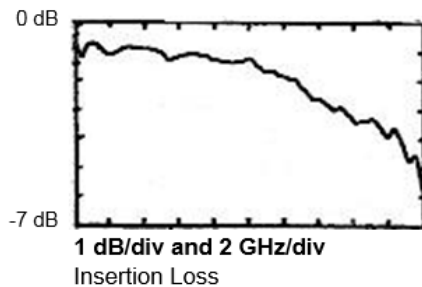


The Model 5550B is a very broadband coaxial bias insertion tee and DC blocking capacitor designed to pass fast rise pulses with minimum waveform distortion. The rise time is 20 ps with a -3 dB bandwidth extending from 100 kHz to 18 GHz. The 5550B will safely carry 500 mA of DC current. However, core saturation limits the low frequency response at DC currents above 50 mA.

Key performance specifications

- 100 kHz to 18 GHz
- 20 ps rise time
- 50 V, 500 mA

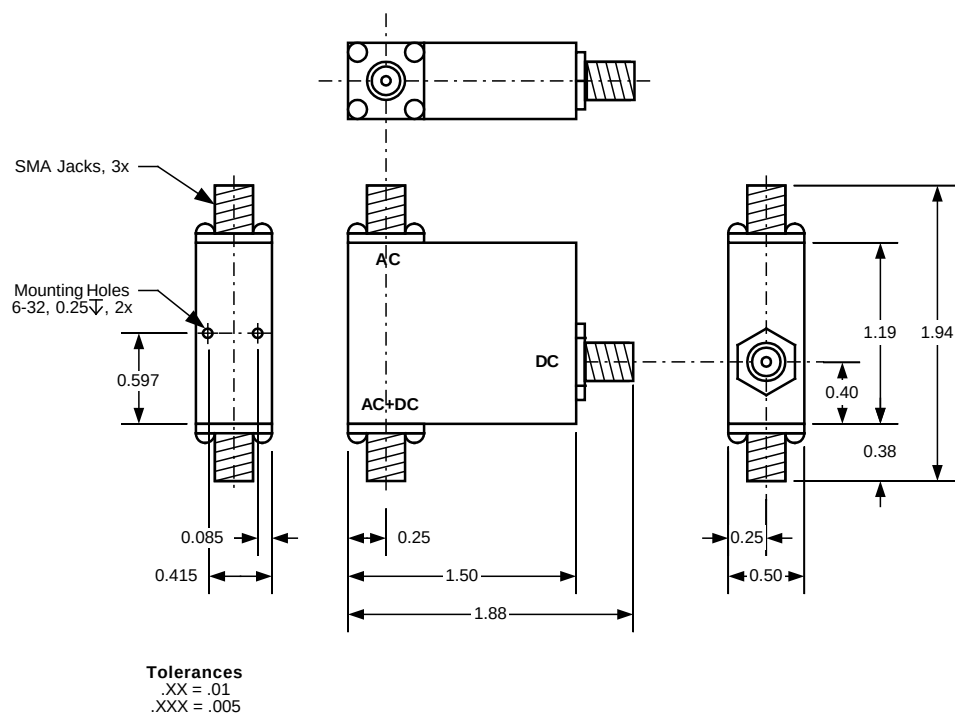
Microwave frequency response



Specifications

Parameter	Symbol	Units	Min	Typical	Max	Comments
Impedance	Z	Ohms		50		
Upper 3 dB frequency	$f_{c,h}$	GHz	14	18		
Lower 3 dB frequency	$f_{c,l}$	kHz		100		
Rise time	t_r	ps		20	25	10 – 90%
Insertion loss	S_{21}	dB		0.9		0.01 – 4 GHz +/- 0.5 dB
Input (AC) Return Loss	S_{11}	dB	RL > 15dB – 2dB / GHz * f(GHz) RL > 11dB – 0.4dB / GHz * f(GHz)			0.1 < f < 2 GHz 2 GHz < f < 10 GHz
Refl. Coefficient (35 ps TDR)	Γ	%		+8 -12		t < 100 ps t > 100 ps
DC voltage	V	Volts			50	
DC current	I	mA			500	
Capacitance	C	μ F		0.02		+/- 20%
Inductance	L	mH		1		+/- 30%
Resistance	R	Ohm		0.4		
RF power	P	W			2.5	Average power
Isolation	S_{13}	dB		30		
DC path bandwidth	$f_{c,DC}$	kHz		16		
Core Saturation (-3 dB low freq.)	$f_{c,lsat}$	kHz		100 160 350		DC Current < 50 mA 150 mA 500 mA
RF Connectors	SMA jacks (f)					
DC Connector	SMA jack (f)					
Warranty	One Year					

PSPL5550B Mechanical dimensions



Ordering information

Model	Description
PSPL5550B	BIAS TEE, 18GHz, 50V, SMA J-J-J

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