

26 GHz Bias Tee

PSPL5541A Datasheet

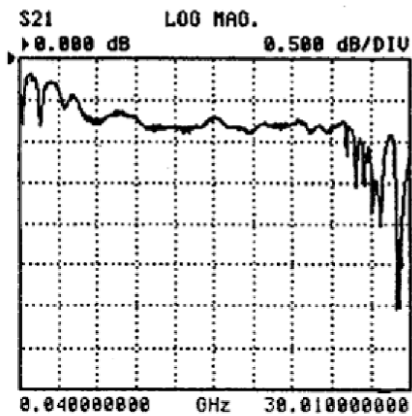


The Model PSPL5541A is a very broadband, coaxial bias insertion tee and DC blocking capacitor. It passes very fast rise pulses with a minimum of waveform distortion. Its rise time is only 8 ps. The frequency response is flat over many decades, and the -3 dB bandwidth extends from 80 kHz to beyond 26 GHz.

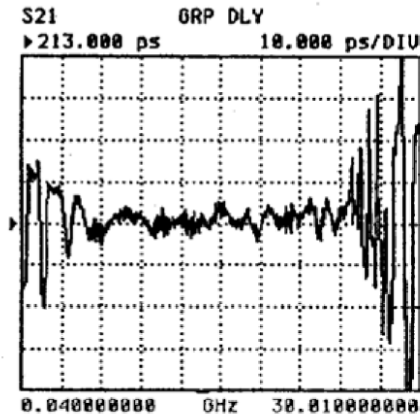
Key performance specifications

- 80 kHz to 26 GHz
- 8 ps rise time
- 50 V, 100 mA

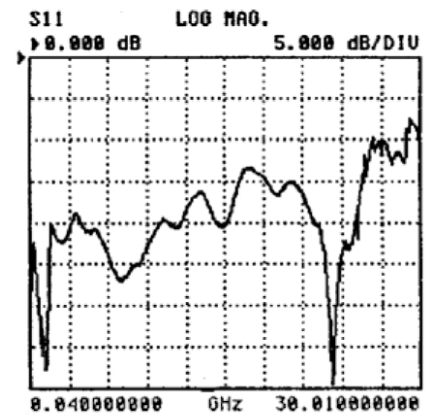
Typical performance



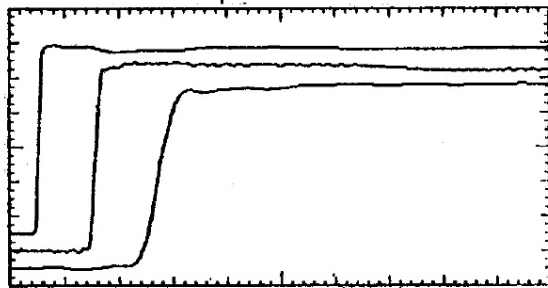
Insertion Loss, AC to AC+DC
0.5 dB/div and 3 GHz/div



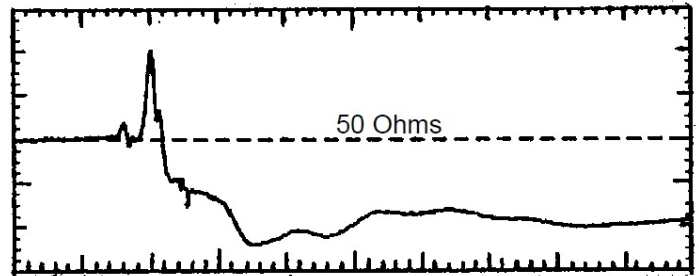
Group Delay
10 ps/div and 3 GHz/div



Return Loss
5 dB/div and 3 GHz/div



500 ps/div, 100 ps/div, 20 ps/div
10 ps Step Response



2.5% rho/div and 500 ps/div
35 ps TDR

Specifications

Parameter	Symbol	Units	Minimum	Typical	Maximum	Comments
Impedance	Z	Ohms		50		
Upper 3 dB frequency	$f_{c,h}$	GHz		>26		
Lower 3 dB frequency	$f_{c,l}$	kHz		80		
Rise time	t_r	ps		8	12	10 – 90%
Insertion loss	S_{21}	dB		0.4 1 1.5		Typical $f < 6$ GHz $f < 20$ GHz
Return loss	S_{11}	dB		20 >15		$f = 100$ MHz $f < 10$ GHz
Refl. Coefficient (35 ps TDR)	Γ	%		-5		$t > 1$ ns (AC Port)
DC voltage	V	Volts			50	
DC current	I	mA			100	
Capacitance	C	μ F		0.02		+/-20%
Inductance	L	mH		1		+/-20%
Resistance	R	Ohm		3.7		
RF power	P	W			2	Average power
Isolation	S_{13}	dB		>40		
DC path bandwidth	$f_{c,DC}$	kHz		16		
Delay	Td	ps		213		AC port to AC+DC port
RF Connectors	SMA jacks (f)					
DC Connector	SMA jack (f)					
Warranty	One Year					

Mechanical dimensions

