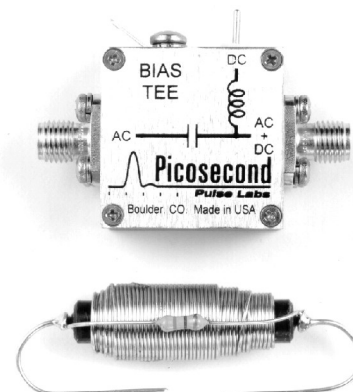


- 5 kHz – 15 GHz
- 23 ps Risetime
- 50V, 500mA

The Model 5547 is a broadband, coaxial bias insertion tee and DC blocking capacitor. It was designed to have a very low cutoff frequency of only 5 kHz. It passes fast rise pulses with a minimum of waveform distortion. Its risetime is 23 ps. The frequency response is very flat, and the -3dB bandwidth extends from 5 kHz to 15 GHz. See Notes [1-4].



Risetime (10%-90%)	< 23 ps, 35 ps max.	DC Voltage	50 V max.
Bandwidth (-3 dB)	>15 GHz, 10 GHz min.	Inductance	1.34 mH, $\pm 30\%$ [4]
Low Frequency (-3 dB)	5 kHz with external inductor; 12 kHz without inductor	DC Current	500 mA max.
Insertion Loss	0.5 dB	Resistance	1.5 Ω
Impedance	50 Ω	RF Power	2 W avg. max.
Refl. Coeff. (35 ps TDR)	-5%, $t > 200$ ps	Isolation	30 dB typical
Return Loss	23 dB @ 100 MHz	Connectors	RF = SMA jacks (f) DC = solder pin [4]
Capacitance	0.44 μ F, -50%, +80%	Dimensions	4.45 x 3.18 x 1.6 cm (case) 2.54 x 2.54 x 1.6 cm
Warranty	One year. See Terms and Conditions of Sale for details		

Notes

[1] Parameters listed are typical values. They are guaranteed only when maximum and / or minimum limits are given.

[2] 15 ps risetime step response measured using a PSPL Model 4015C 15 ps pulse generator and an HP-54124A, 50 GHz oscilloscope.

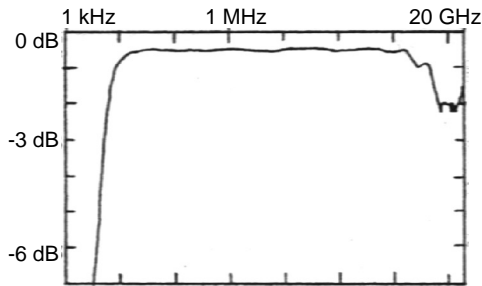
[3] Frequency response measured using a Wiltron 5447A, 10 MHz - 20 GHz network analyzer.

[4] A 1 mH choke is supplied with the bias tee. It is to be wired in series directly to the DC solder terminal on the coax module. This is a high impedance point. Avoid using long wire, especially coax, for this connection. Do not locate the choke close to ground. Excessive stray capacitance will cause a resonance that will appear as a dip in the insertion loss between 1 and 10 MHz.

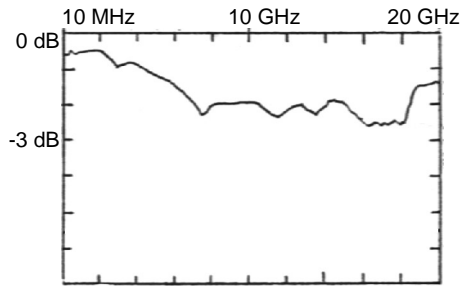
Ordering Information

Model Number	Connector Configuration *			
	AC	AC+DC	DC	
5547-107	SMA Jack (f)	Jack (f)	SP	
5547-108	SMA Jack (f)	Jack (f)	SP	(with mounting plate)
5546-114	SMA Jack (f)	Plug (m)	SP	
5547-122	SMA Plug (m)	Plug (m)	SP	

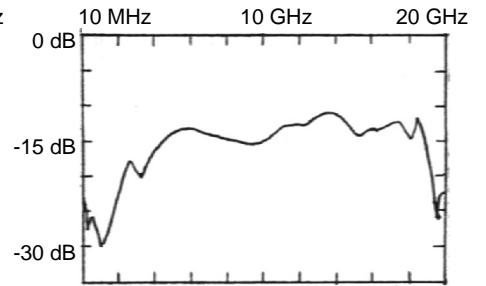
* Other connector combinations may be available on request.



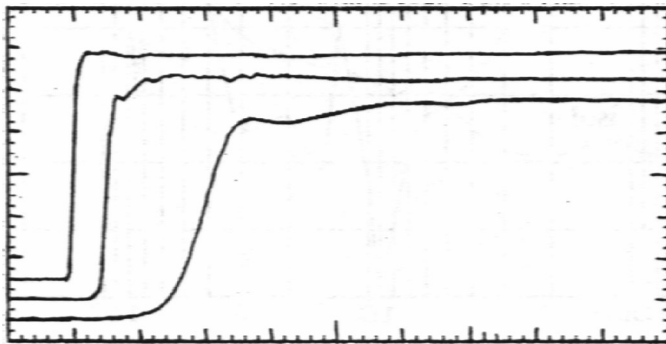
1 dB/div
Insertion Loss



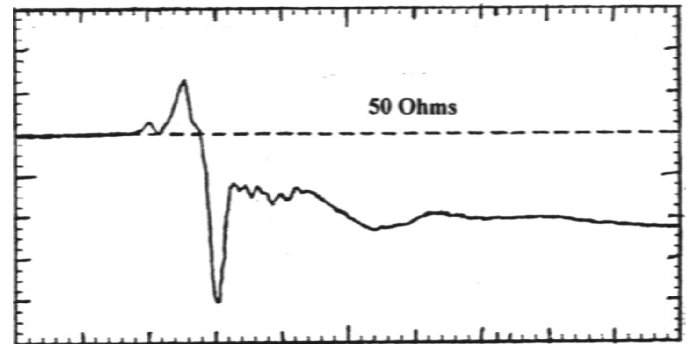
1 dB/div and 2 GHz/div
Insertion Loss



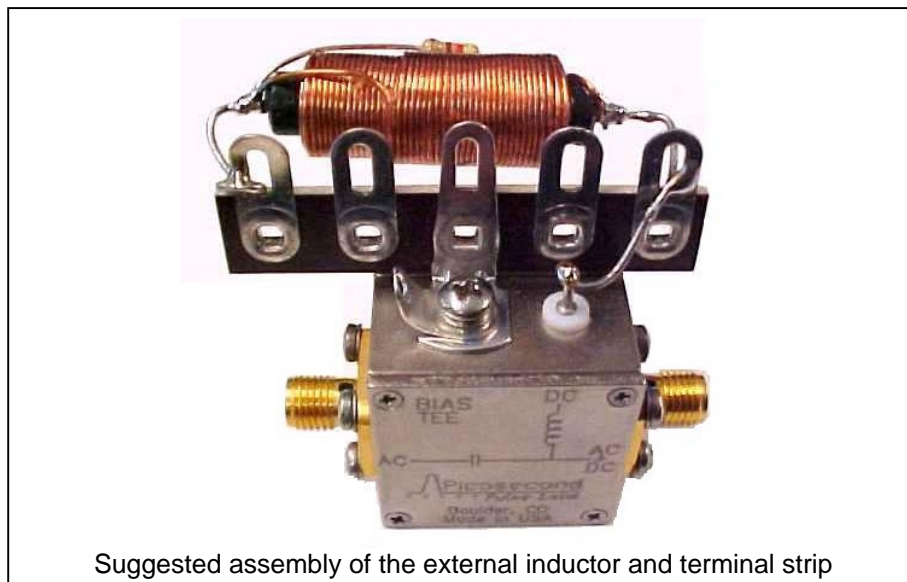
5 dB/div and 2 GHz/div
Return Loss



Top to bottom: 500 ps/div, 100 ps/div, and 20 ps/div
Response to 15 ps risetime input step



2.5% rho/div and 200 ps/div
35 ps TDR of AC port



Suggested assembly of the external inductor and terminal strip