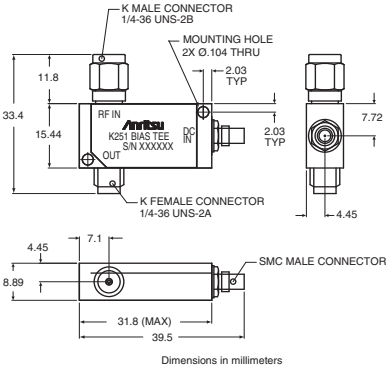
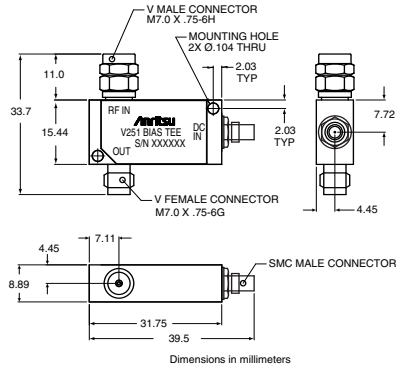
ULTRA-WIDEBAND BIAS TEES

K251 50 kHz to 40 GHz, V251 100 kHz to 65 GHz



K251 outline

These ultra-wide bandwidth bias tees have been optimized for optical communications and other high-speed pulse, data or microwave applications. Designed to simultaneously apply both DC and RF drive signals to a device via a single input port, these bias tees feature fast rise times, excellent low frequency response, minimum insertion loss and flat group delay. Precision K Connector® and V Connector® interfaces assure excellent impedance match across the wide bandwidths available. A one year warranty is provided. Adapters are available to convert between K and V Connectors - See page 21 of this catalog for details.



V251 outline

Features

- *Ideal for Optical Communications Applications*
- *Low Insertion Loss*
- *Risetime: <5 ps typical (V251), <7 ps typical (K251)*

Specifications

Model	Frequency range 3dB BW	Insertion loss	Return loss	Rise time	Group delay	Max DC current	Max DC voltage	Max RF power	Connectors
K251	50 kHz to 40 GHz	<2 dB typical	See Plot	< 7 ps typical	110 ± 2 ps typical	100 mA	16VDC	1 W	RF In: K(m) RF Out: K(f) Bias: SMC(m)
V251	100 kHz to 65 GHz	< 2.5 dB typical	See Plot	< 5 ps typical	113 ± 2 ps typical	100 mA	16VDC	1 W	RF In: V(m) RF Out: V(f) Bias: SMC(m)

Specifications apply over the full DC Bias current range and over the temperature range of 0°C to +70°C.

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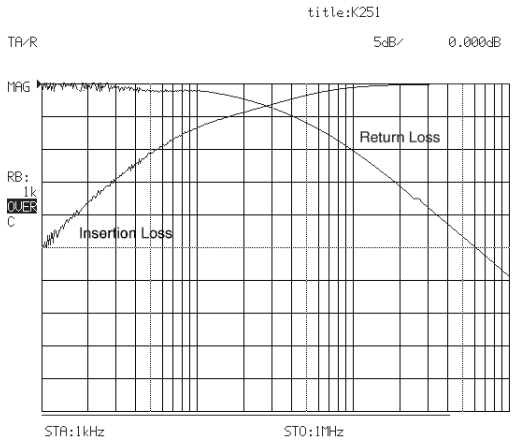
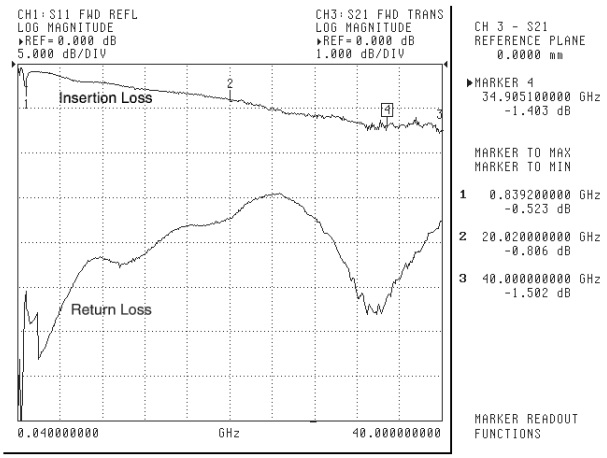
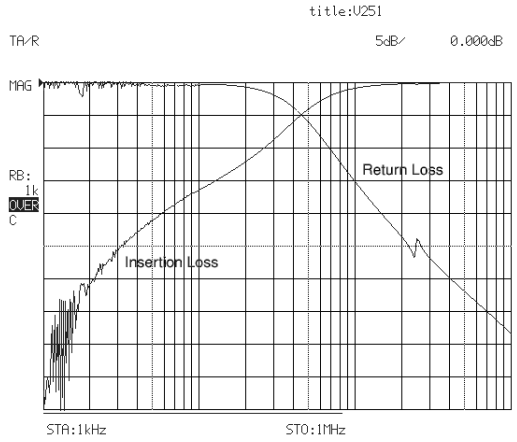


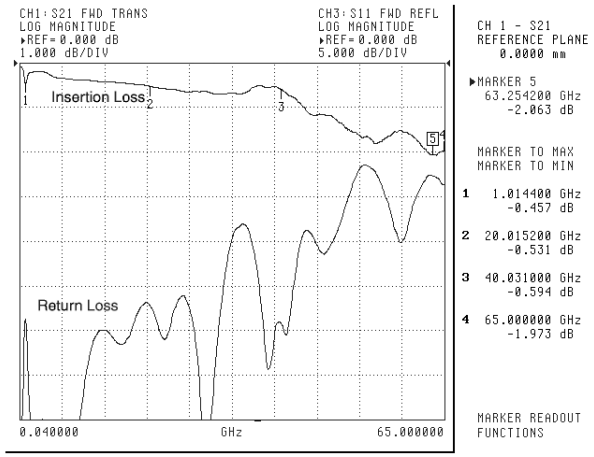
Typical Low Frequency Insertion Loss and Return Loss measured on K251 over the range of 1kHz to 1 MHz.



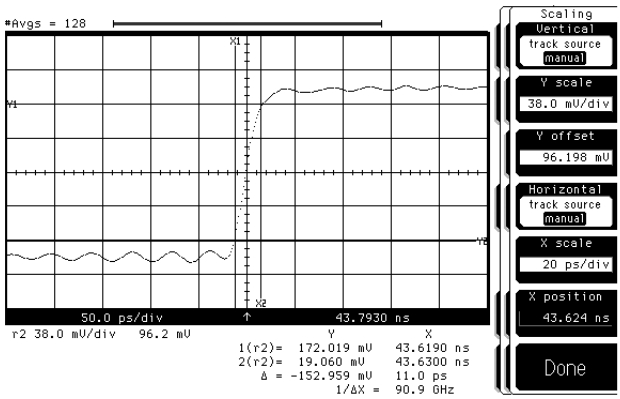
Typical Frequency Insertion Loss and Return Loss measured on K251 over the range of 40 MHz to 40 GHz.



Typical Low Frequency Insertion Loss measured on V251 over the range of 1 kHz to 1 MHz.



Insertion Loss and Return Loss measured on V251 over the range of 40 MHz to 65 GHz.



Typical Uncorrected Pulse Response for V251. Absolute risetime for the Bias Tee is derived from this measured data by applying the RSS method to compensate for the risetime of the input pulse.

$$\sqrt{T_{BT}^2 + T_{PG}^2} = T\ meas.$$

T meas. = uncorrected risetime
T_{BT} = absolute Bias Tee risetime
T_{PG} = risetime of input pulse

Ordering information

Please specify model/order number, name, and quantity when ordering.

Model/Order No.	Name
K251	Precision Bias Tee, 50 kHz to 40 GHz
V251	Precision Bias Tee, 100 kHz to 65 GHz