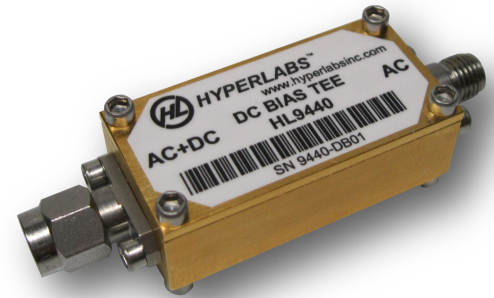


HL9440 Broadband DC Bias Tee

Features and Technical Specifications

Bandwidth (-3 dB)	16 KHz to 18 GHz
Risetime	20 ps
Insertion Loss	< -1 dB to 5 GHz, -2 dB at 10 GHz; see <i>Figure 1</i>
Return Loss	25 dB at 10 GHz; see <i>Figs. 2-3</i> for details
Amplitude Match (matched pair only)	± 0.25 dB, typical; see <i>Figure 4</i> for details
Phase Match (matched pair only)	See <i>Figure 5</i> for details
Block Capacitance	0.1 μ F \pm 10%, DC
Inductance	215 μ H
DC Current	500 mA
Voltage Rating	10 V DC
Impedance	50 Ω , 45 Ω at insertion point for \approx 1 ns
Connectors	1 x SMA Plug In 1 x SMA Jack Out
Dimensions, single unit	60.4 x 25.3 x 13.8 mm 2.38" x 1.0" x 0.54"
Weight, single unit	23.8 g 0.84 oz
Temperature Limits	0° to +40° C, operating -40° to +85° C, storage
Warranty	1 year, repair or return; see website for details



PRODUCT SUMMARY

The HL9440 is a broadband DC bias tee that allows for the insertion of a DC bias current into a circuit with minimal perturbation of the impedance of a 50 ohm transmission line.

It is suitable as a trigger source with minimum perturbation of the through signal path.

It can be used for applications such as biasing and testing active broadband devices, measuring carrier lifetime of switching diodes, and connecting broadband terminations to an AC-coupled amplifier.

DEPLOYMENT NOTES

This product is available as either a single unit or as part of an amplitude- and phase-matched pair. Please contact HYPERLABS for pricing and availability.

ADDITIONAL DATA

Higher-resolution versions of the charts on the following pages are available on our website.

HL9440 Bandwidth and Insertion Loss (Single Unit)

Figure 1 shows the typical HL9440 insertion loss and bandwidth (-3 dB) from 5 MHz to 20 GHz.

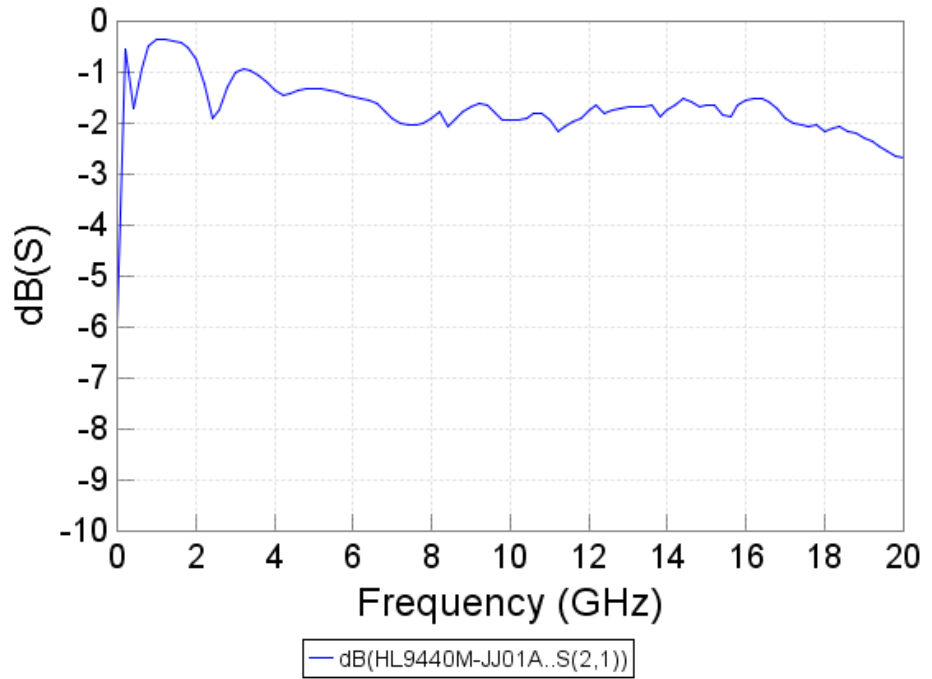


Figure 1: Typical HL9440 insertion loss and bandwidth (-3 dB) from 5 MHz to 20 GHz

HL9440 Return Loss

Figure 3 shows the return loss on the HL9440 Input port. Figure 4 shows the return loss on the HL9440 Output port. Both plots show 5 MHz to 20 GHz.

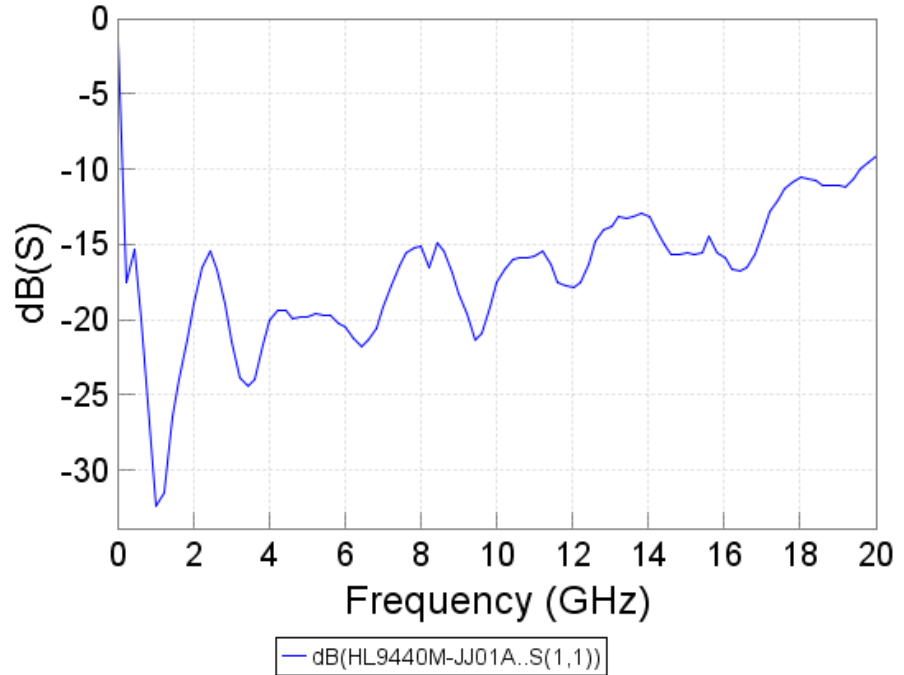


Figure 2: Typical return loss on the HL9440 Input port

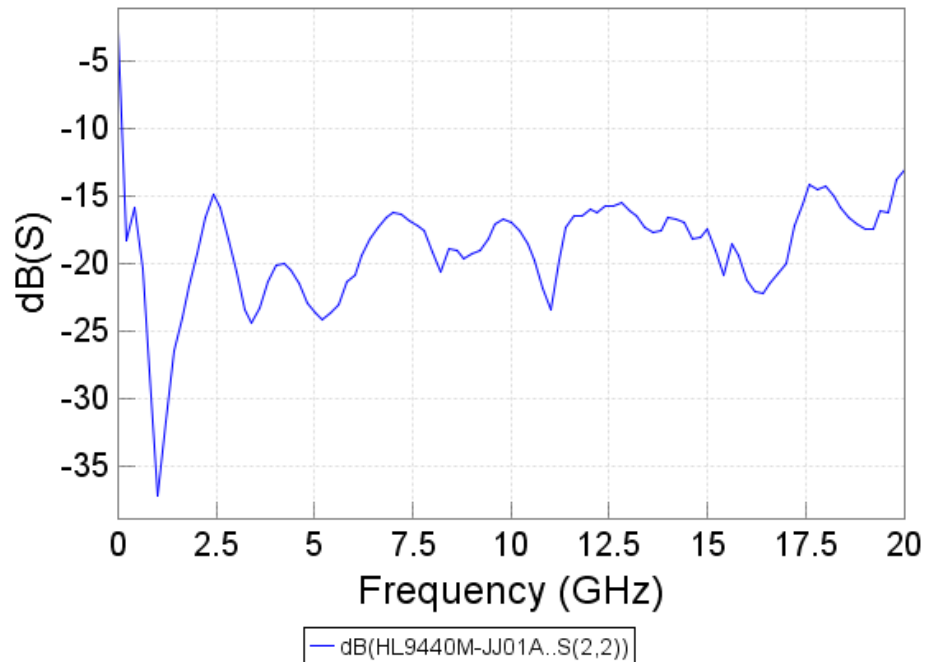


Figure 3: Typical return loss on the HL9440 Through Output port

Amplitude and Phase Match

Figure 4 shows amplitude match on a matched pair of HL9440 devices. Figure 5 shows phase match in degrees from 180° on a matched pair of HL9440 devices. Both plots show from 5 MHz to 20 GHz.

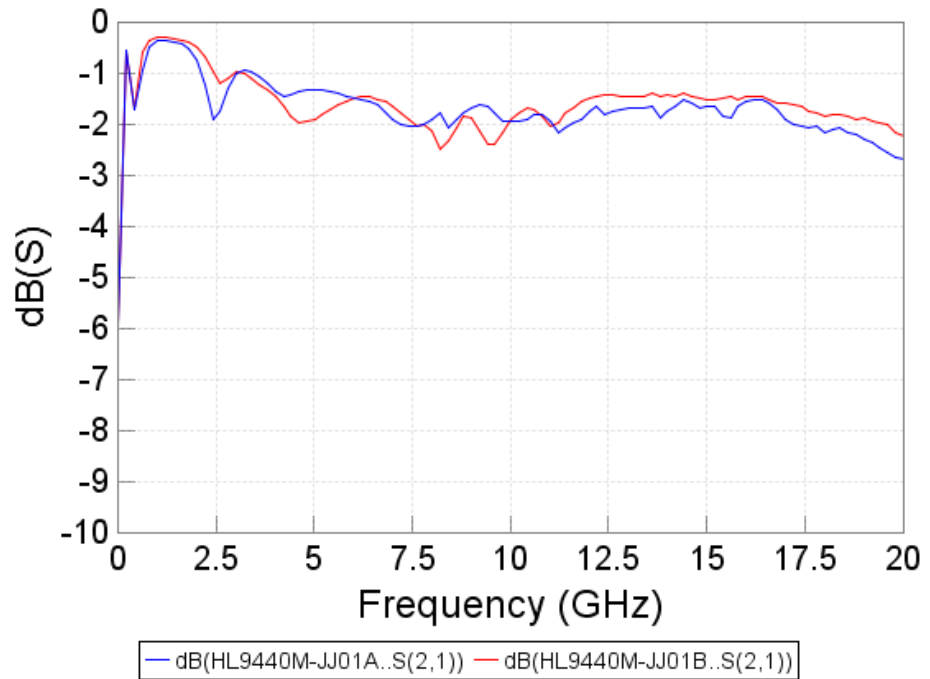


Figure 4: Typical amplitude match of the Output port of two matched HL9440 devices

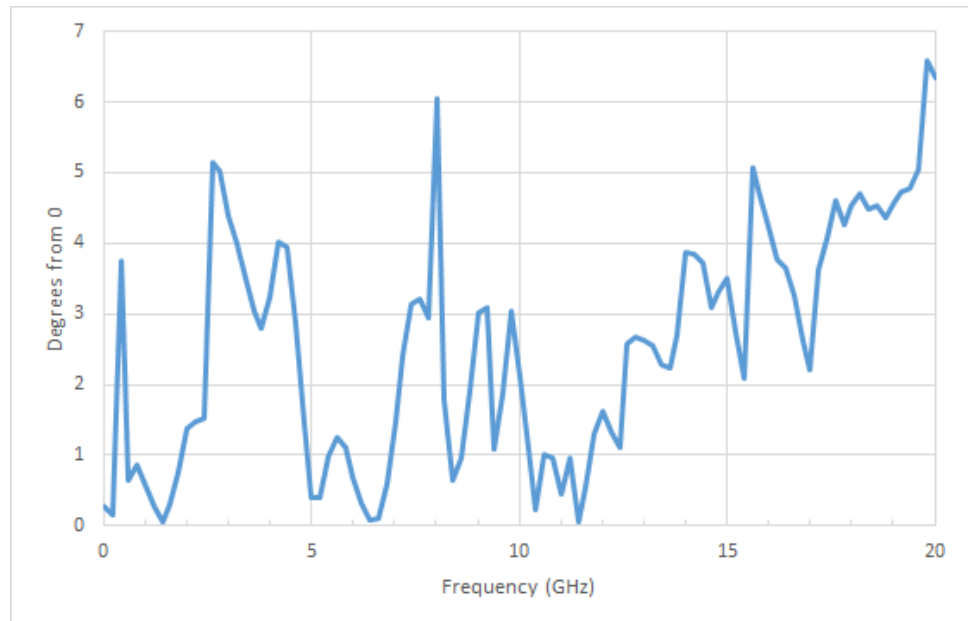


Figure 5: Typical phase match on the output port of two matched HL9440 devices