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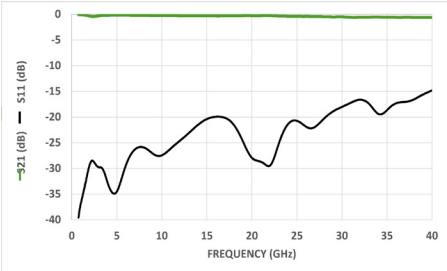
HL8334 DC Block (2 kHz to 40 GHz)

Features and Technical Specifications

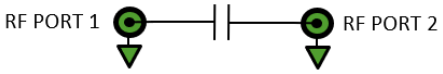
Bandwidth	7 kHz to > 40 GHz (opt. -220, -HV) 2 kHz to > 40 GHz (opt. -2200)	
Amplitude Match	± 0.1 dB, typ.	
Phase Match	± 4°, f = 40 GHz (opt. -M)	
Insertion Loss See *Figs.1-2*	< 1 dB typ.	< 1.25 dB typ, (opt. -HV)
Return Loss See *Fig. 3*	20 dB, 20 kHz < f ≤ 25 GHz 15 dB, f > 25 GHz	
Breakdown Voltage	10 V, max (opt. -220, -2200) 25 V, max (opt. -220-HV)	
Maximum Input Power	*+30 dBm*	
Group Delay See *Fig. 4*	≈ 110 ps	
Rise Time (10-90%)	8.75 ps	
Capacitance	220 nF (opt. -220, -220-HV) 2200 nF (opt. -2200)	
Impedance	50 Ω	
Connectors (Port 1 / Port 2)	2.92 mm, jack-jack 2.92 mm, jack-plug (standard config) 2.92 mm, plug-plug	
Dimensions	1.23” x 0.375” x 0.375” 31.2 x 9.53 x 9.53 mm	
Weight	8 g (0.28 oz.)	
Temperature Limits	-40° to +70° C, operating	
RoHS Compliant	Yes, assembled with lead-free solder	
REACH Compliant	Yes	
Warranty	1 year, see website	



HL8334, opt. -M-220-JP



Typical HL8334 Insertion and Return Loss



HL8334 Schematic and Port Assignments

PRODUCT SUMMARY

The HL8334 is an ultra-broadband DC Block with a typical insertion loss of < 1 dB (< 1.25 dB for opt. -HV) throughout the specified bandwidth range.

The DC block will remove DC bias from the input signal to prevent damage to DC-sensitive devices or equipment.

These devices are suitable for use in 112 Gbps PAM4 communications systems, optical communication systems, high-speed data systems, level shifting, cascading, and interfacing between devices with incompatible DC operating points.

They can also be used to improve RF power measurements when a power meter with DC sensitivities is used.

OPTIONS

Please specify one of the following options from each category:

-M, matched pair
-U, unmatched part(s)

-220, 220 nF (0.22 µF), 10 V capacitor
-2200, 2200 nF (2.2 µF), 10 V capacitor
-220-HV, 220 nF (0.22 µF), 25 V capacitor

-JJ, jack RF 1 and RF 2
-JP, jack RF 1, plug RF 2
-PP, plug RF 1 and RF 2

Note: All specifications are based on test results using the standard connector configuration. Specifications may vary slightly for other configurations.

HL8334 Plot Diagrams

Figures 1-4 show the typical S-parameter characteristics and group delay for an HL8334.

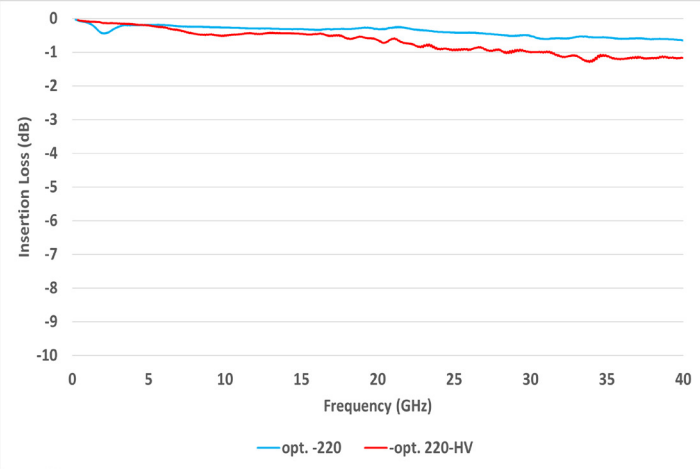


Figure 1: Typical HL8334 Insertion Loss

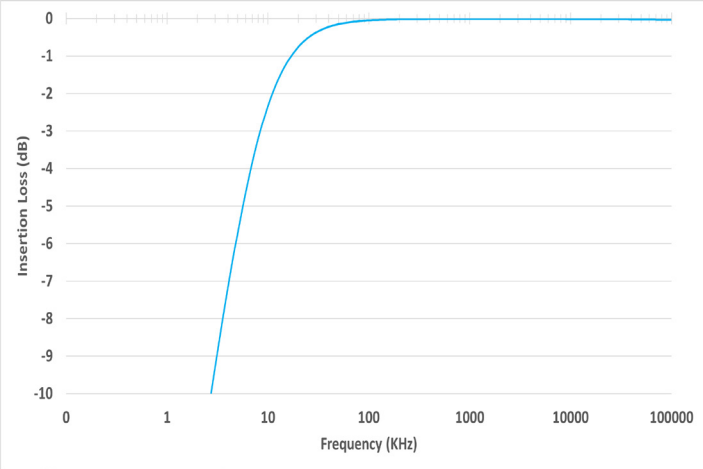


Figure 2: Typical HL8334-220 Low-frequency Performance

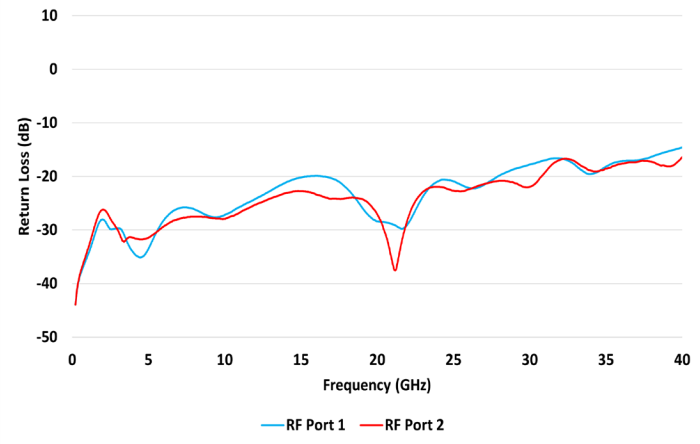


Figure 3: Typical HL8334 Return Loss

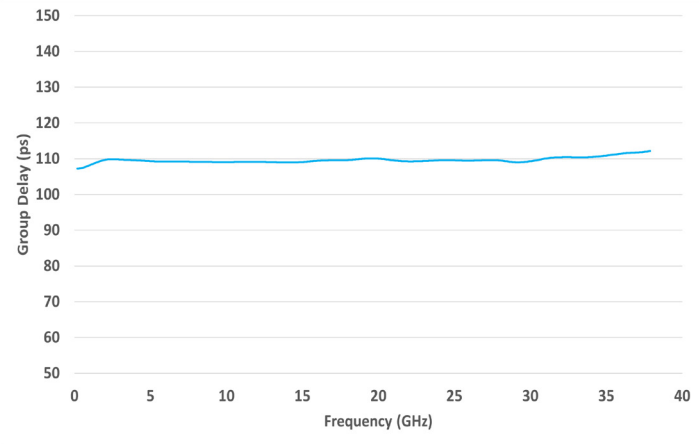


Figure 4: Typical HL8334 Group Delay

HL8334 Dimensional Drawing

Figure 5 shows a mechanical drawing of an HL8334. Unless otherwise noted, all units are in inches. See page 1 for full dimensions.

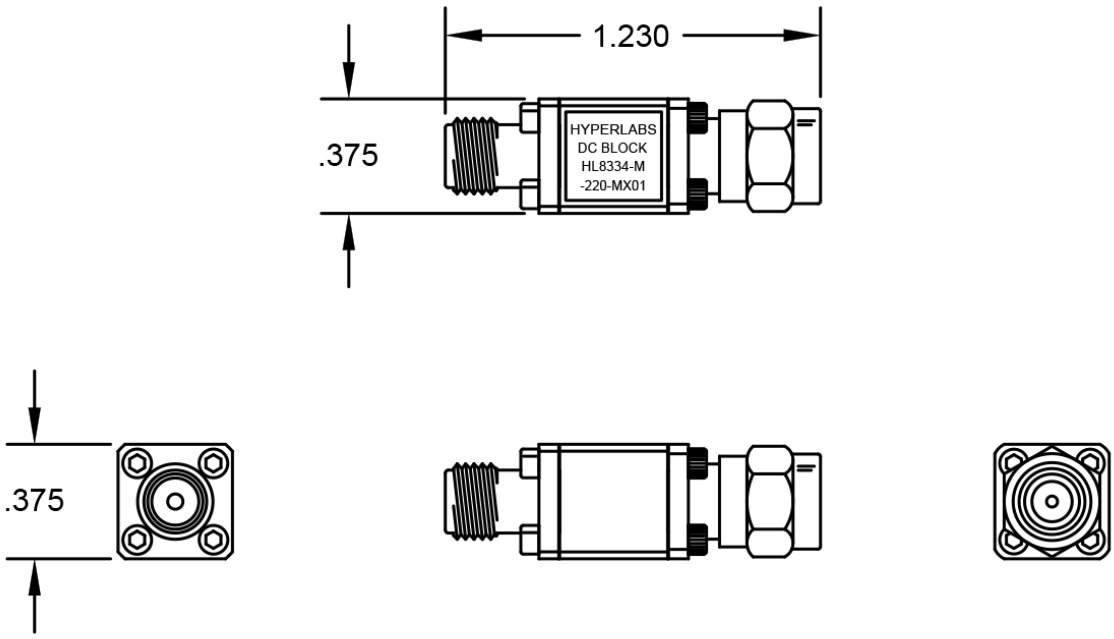


Fig 5: HL8334 Mechanical Drawing