



## HL8334 DC Block (7 kHz to 40 GHz)

### Features and Technical Specifications

Bandwidth	7 kHz to > 40 GHz (opt. -220) 2 kHz to > 40 GHz (opt. -2200)
Amplitude Match	± 0.1 dB, typ.
Phase Match	± 4°, f = 40 GHz (opt. -M)
Insertion Loss	< 0.75 dB typ. < 1.0 dB max See Figs. 1-2
Return Loss	20 dB, 20 kHz < f ≤ 25 GHz 15 dB, f > 25 GHz See Fig. 3
Breakdown Voltage	10 V, max
Maximum Input Power	+30 dBm
Group Delay	≈ 110 ps See Fig. 4
Rise Time (10-90%)	8.75 ps
Capacitance	220 nF (opt. -220) 2200 nF (opt. -2200)
Impedance	50 Ω
Connectors (PORT 1 / PORT 2)	2.92 mm, jack-jack 2.92 mm, jack-plug 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

#### PRODUCT SUMMARY

The HL8334 is an ultra-broadband DC Block with a typical insertion loss of < 0.75 dB 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) capacitor

-2200, 2200 nF (2.2 μF) capacitor

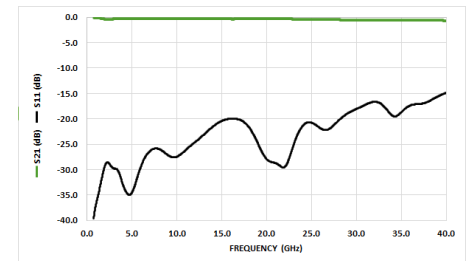
-JJ, jack RF 1 and RF 2

-JP, jack RF 1, plug RF 2

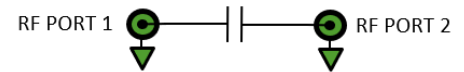
-PP, plug RF 1 and RF 2



HL8334, opt. -M-220-JP



Typical HL8334 Insertion and Return Loss



HL8334 Schematic and Port Assignments



## HL8334 Bandwidth and Insertion Loss

Figure 1 shows the insertion loss and bandwidth of the HL8334 from 10 MHz to 40 GHz.

Figure 2 shows the low-frequency response to 100 Hz.

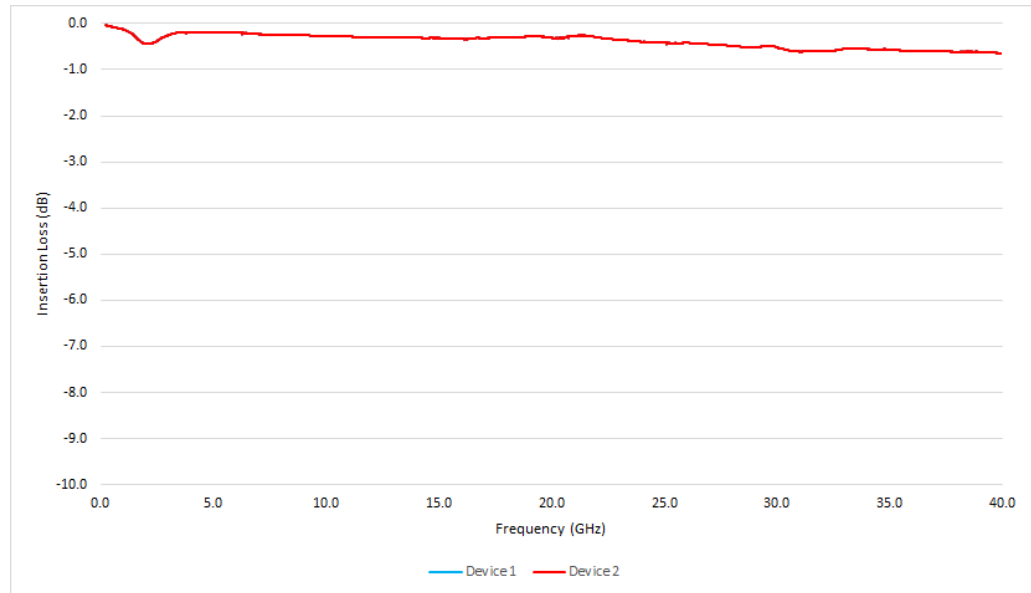


Figure 1: Typical HL8334 Bandwidth and Insertion loss

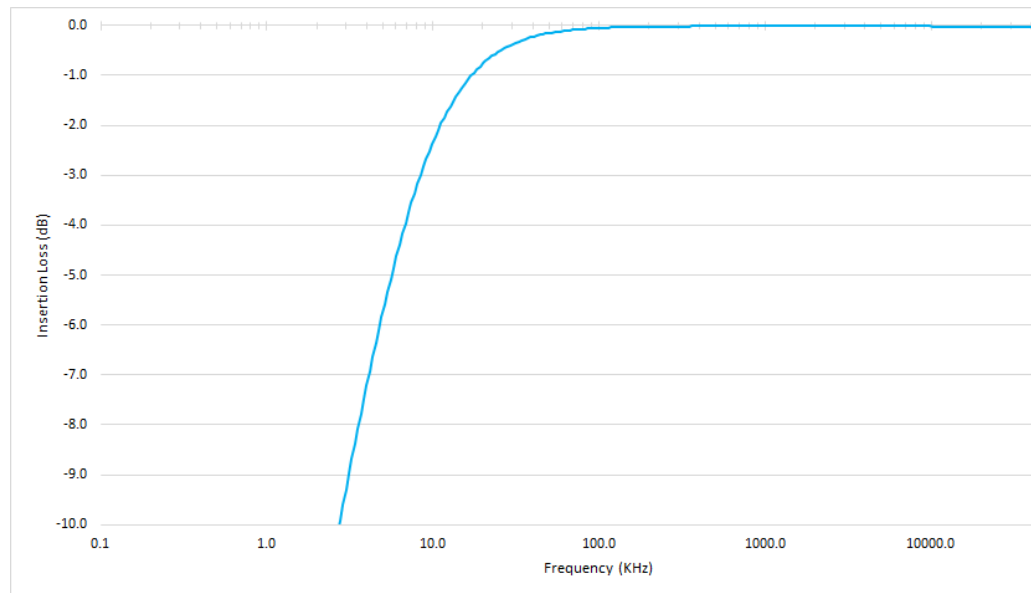


Figure 2: Typical HL8334-220 Low-frequency Performance



## HL8334 Return Loss and Group Delay

Figure 3 shows return loss and Figure 4 shows the typical HL8334 Group Delay from 10 MHz to 40 GHz.

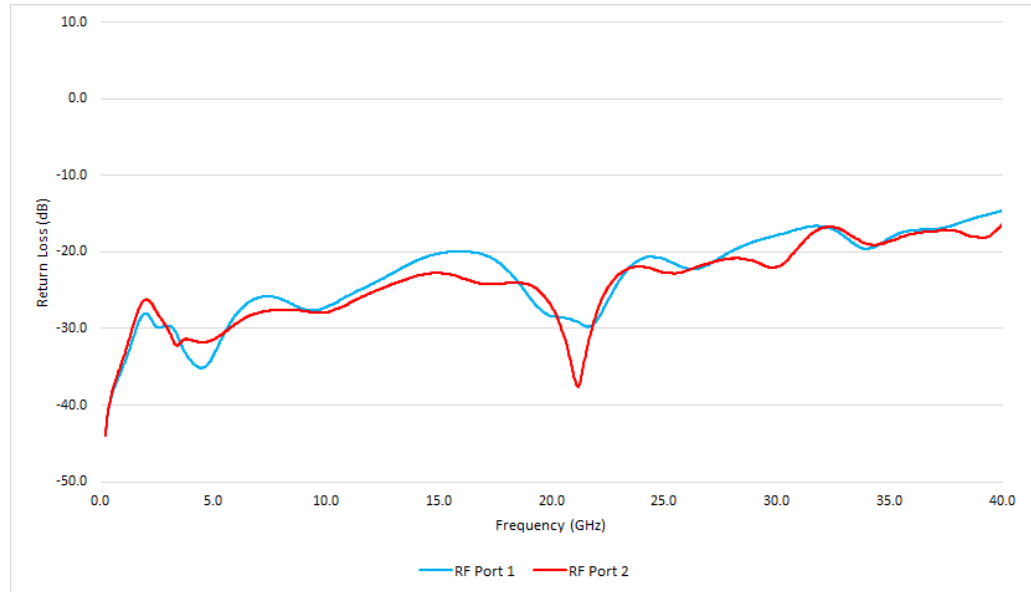


Figure 3: Typical HL8334 Return Loss

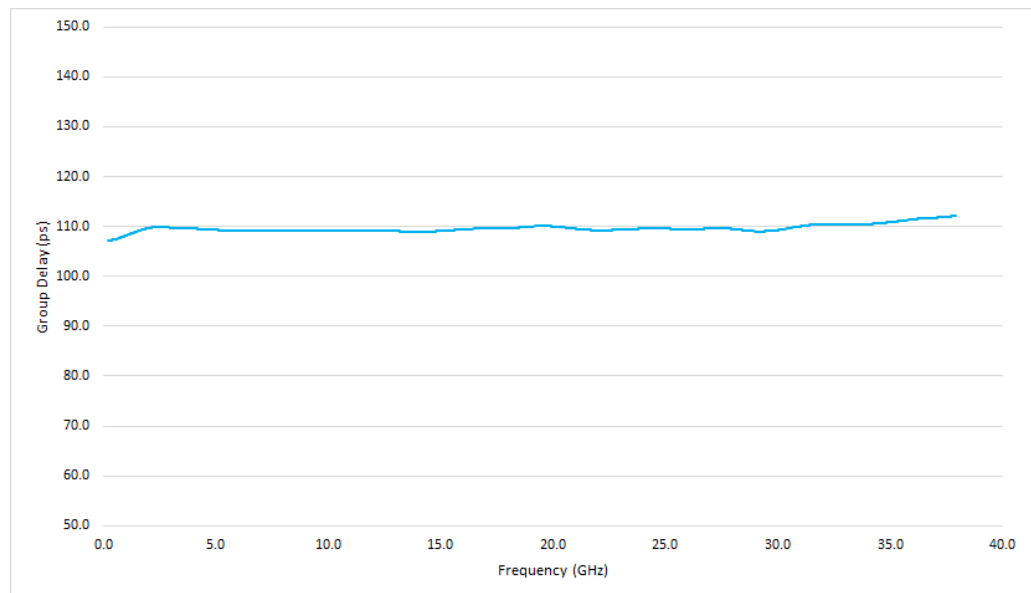


Figure 4: Typical HL8434 Group Delay

### 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.

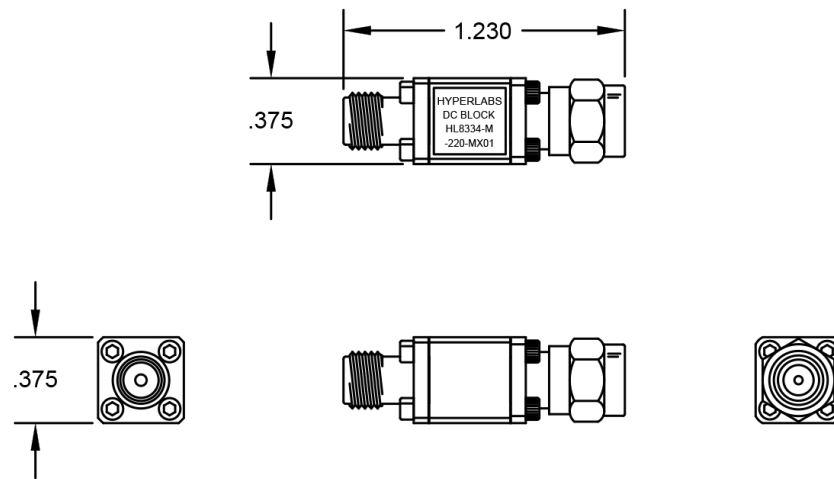


Fig 5: HL8334 Mechanical Drawing