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With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# HIGH FREQUENCY BALUN ADAPTER

For 150  $\Omega$  Fibre Channel , 100  $\Omega$  Gigabit Ethernet and 78  $\Omega$  High Speed 1553 Military/Aerospace Grade/Specialty Components



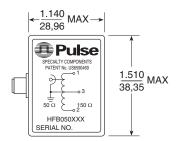


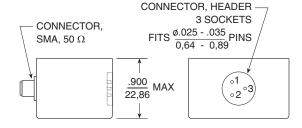
- Transforms a balanced differential signal to a 50  $\Omega$ , grounded, unbalanced signal for testing differential cable
- Designed for standard test equipment with SMA connectors
   Wide bandwidth 1.0 MHz 1.2 GHz
- Operating temperature range from
- **1** 0° C to 70° C

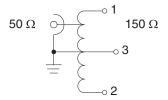
Electrical Specifications @ 25°C — Operating Temperature 0° C to +70° C				
Part Number*	Impedance $(\Omega)$	<b>Irated</b> (A)	<b>Insertion Loss</b> (dB MAX) 1.0 MHz - 1.2 GHz	<b>Return Loss</b> (dB MIN) 1.0 MHz - 1.2 GHz
	Unbalanced	Balanced		
HFB050150	50	150	-2	15
HFB050100	50	100	-2	15
HFB050078	50	78	-2	15

Mechanical Schematic

#### HFB050XXX







 Weight
 40.0 grams MAX

 Packaging
 1 per box

 $\begin{array}{c} \hline \textbf{Dimensions:} & \underline{Inches} \\ \hline mm \\ \hline \textbf{Unless otherwise specified, all tolerances are $\pm$ $\underline{.010}$ \\ \hline 0.25 \\ \hline \end{array}$ 

pulseelectronics.com M100.Q (3/13)

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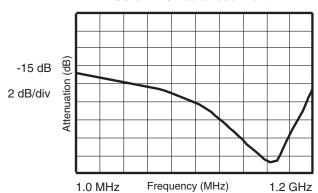


### **Application Notes**

The Specialty Components Division has developed a high frequency BALUN for test and measurement applications. Wide bandwidth and high frequency response makes thisdevice ideal for differential mode measurement in high

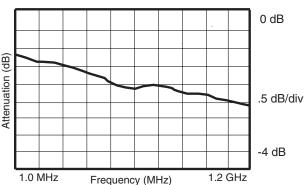
speed applications such as Fibre Channel, Gigabit Ethernet and next generation MIL-STD-1553. The BALUN allows design engineers to characterize differential mode devices using single-ended test equipment as shown below.

### Typical Return Loss - S11 50 ohm Unbalanced Port



# Typical Insertion Loss - S21

Two Baluns Configured Back to Back

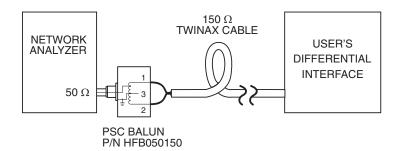


**NETWORK ANALYZER** CH-1 CH-2 DUT #1 **DUT #2** 

Insertion loss S21 is measured with two units connected back to back as shown.

Note 1: Correct value of S21 for each DUT will be 1/2 of the value shown in graph.

Note 2: Return loss S11 is measured on 50 ohm port with 150 ohms termination on balance port.



### For More Information

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