HIGH FREQUENCY BALUN ADAPTER

For 150Ω Fibre Channel , 100Ω Gigabit Ethernet, and 78Ω High Speed 1553.

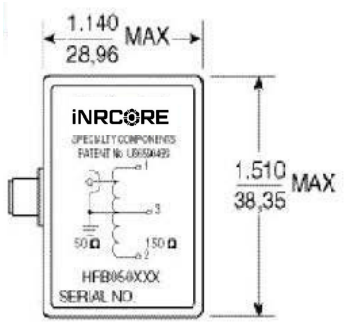
- Transforms a balanced differential signal to a 50 Ω , grounded unbalanced signal for testing differential cable
- Designed for standard test equipment with SMA connectors
- Wide bandwidth 1.0 MHz – 1.2 GHz
- Moisture Sensitivity Level: 1

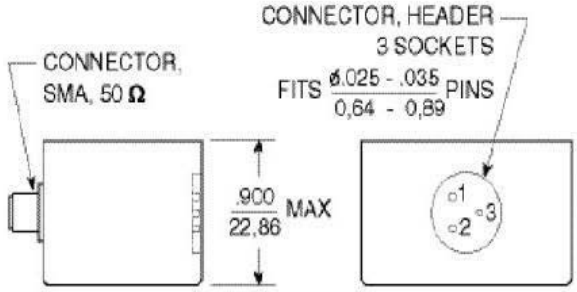
Electrical Specifications @ 25 °C – Operating Temperature – 0 °C to +70 °C				
Part Number*	Impedance (Ω)	Irated (A)	Insertion Loss (dB MAX) 1.0 MHz - 1.2 GHz	Return Loss (dB MIN) 1.0 MHz - 1.2 GHz
	Unbalanced	Balanced		
HFB050150	50	150	-2	15
HFB050100	50	100	-2	15
HFB050078	50	78	-2	15

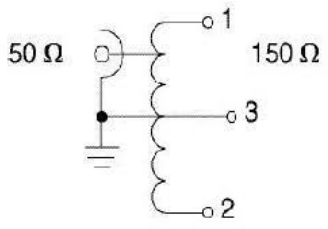
Mechanical

Electrical Schematic

HFB050XXX







Dimensions: Inches / mm

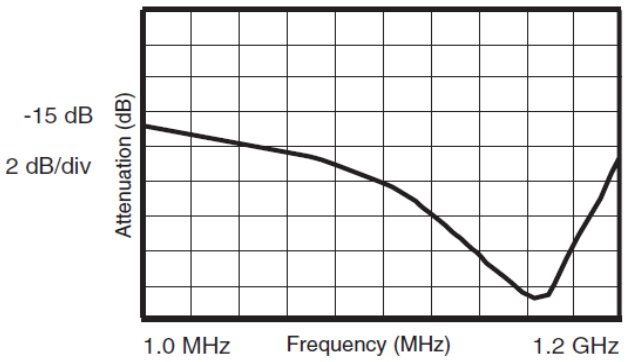
Unless otherwise specified, all tolerances are: ± .010 / 0,25

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.

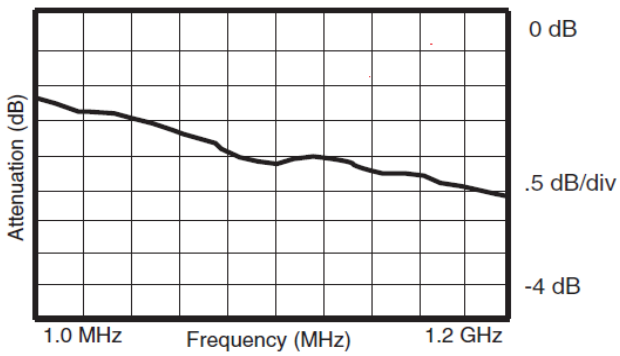
Typical Return Loss - S11

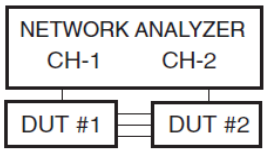
50 ohm Unbalanced Port



Typical Insertion Loss - S21

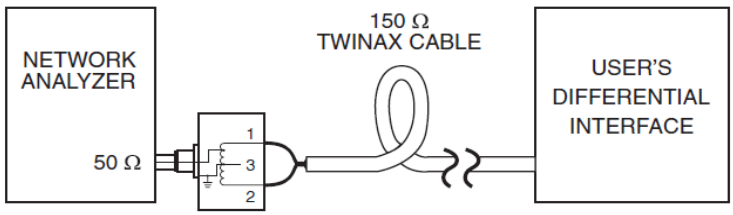
Two Baluns Configured Back to Back



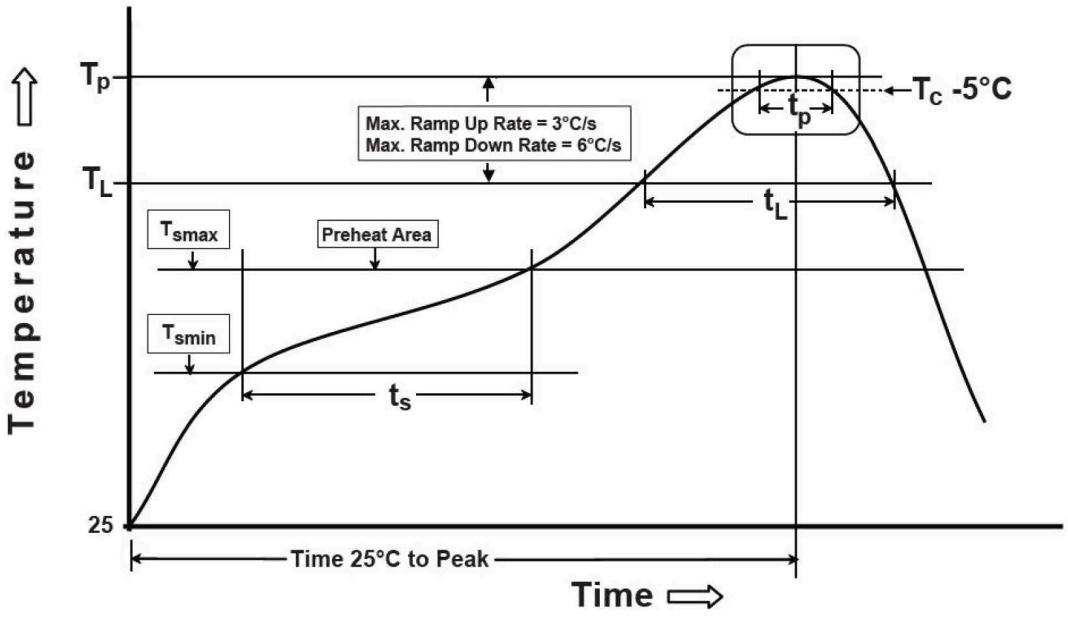


Insertion loss S21 is measured with two units connected back to back as shown.

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.



Tin/Lead Recommended Reflow Profile (Based on J-STD-020D)



T_{SMIN} (°C)	T_{SMAX} (°C)	T_L (°C)	T_P (°C MAX)	t_S (s)	t_L (s)	t_P (s MAX)	Ramp-up rate (T_L to T_P)	Ramp-down rate (T_P to T_L)	Time 25°C to peak temperature (s MAX)
100	150	183	235	60-120	60-150	20	3°C/s MAX	6°C/s MAX	360

Notes:

1. All temperatures measured on the package leads.
2. Maximum times of reflow cycle: 2.

For More Information

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