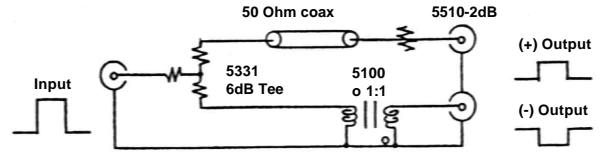


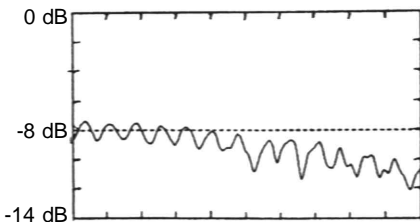
# Model 5315A BALUN

## Differential Pulse Splitter

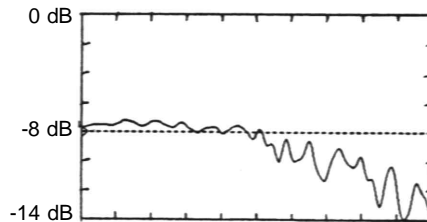
The Model 5315A BALUN is a broadband differential pulse splitter. A signal fed into the 50 Ω input is split equally into two 50 Ω outputs. One output is the same polarity as the input, while the other output is inverted in polarity. The 5315A BALUN has a very fast 21 ps risetime and a bandwidth of 17 GHz. One application of the 5315A is to provide push-pull, balanced drive signals for the deflection plates of ultra-wideband, traveling-wave oscilloscopes.



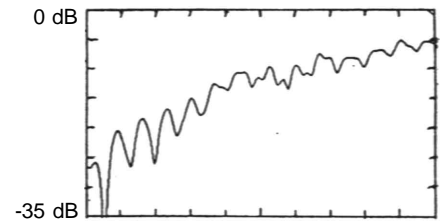
<b>Risetime (10%-90%)</b>	21 ps typical, 25 ps max.	<b>Delay</b>	0.9 ns
<b>Bandwidth (-3 dB)</b>	17 GHz typical	<b>Diff. Delay Balance</b>	±2 ps max.
<b>Low Frequency Cutoff</b>	200 kHz (-3 dB)	<b>Diff. Balance</b>	< 0.5 dB, t < 500 ps 1 dB, t > 1 ns
<b>Insertion Loss</b>	8 dB, nominal	<b>Max. Input</b>	0.75 Watts
<b>Impedance</b>	50 Ω	<b>Connectors</b>	SMA jacks (f)
<b>Refl. Coeff.</b> (35 ps TDR)	<15% ptp (t < 150 ps) -4%, t > 1 ns -4%, t > 3 ns -15%, t > 2 ns	<b>Weight</b>	0.5 lbs. (0.2 kg)
<b>Return Loss</b>	0.1 < f < 10 GHz RL > 20 dB -1.5 dB/GHz*f (GHz)	<b>Dimensions</b>	6" x 3.7" x 1.1" (15 x 9.4 x 2.8 cm)
<b>Sag Time Constant</b>	800 ns (1/e)	<b>Warranty</b>	One year. See Terms and Conditions of Sale for details



**2 dB/div and 2 GHz/div**  
Insertion Loss: Input to (+) output



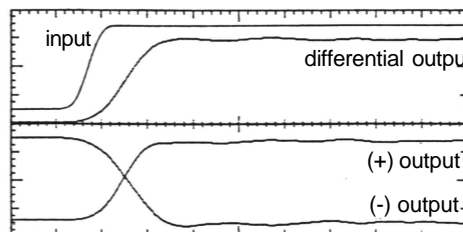
**2 dB/div and 2 GHz/div**  
Insertion Loss: Input to (-) output



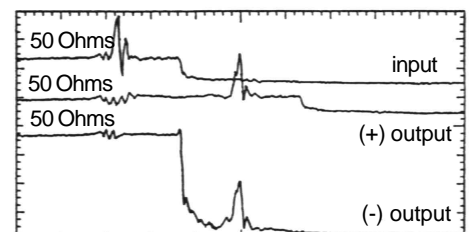
**5 dB/div and 2 GHz/div**  
Return Loss

### Ordering Information

<b>Model Number</b>
5315A-104



**20 ps/div**  
Transmission Response to 10 ps risetime step into input port



**5% rho/div and 500 ps/div**  
35 ps TDR

### Notes

- [1] Parameters listed are typical values. Guaranteed only when max/min limits are given.
- [2] 10 ps risetime step response and TDR waveform measured using a PSPL Model 4015B pulse generator and an HP-54124A 50 GHz, 9.4 ps digital sampling oscilloscope.
- [3] Frequency response measured using a Wiltron 5447A 10 MHz - 20 GHz network analyzer.
- [4] Due to internal reflections, the 5315A is NOT recommended for use with GigaBit logic signals nor in a differential network analyzer. For details, see PSPL Application Note AN-8.