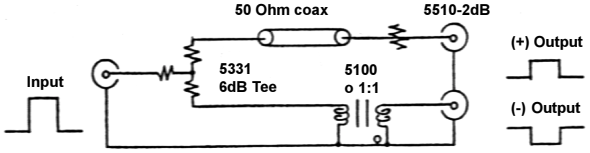
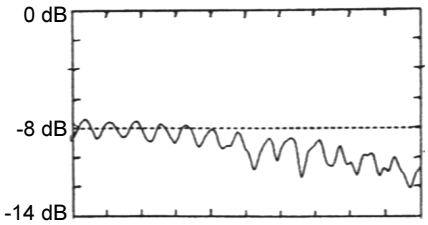
Model 5315A BALUN

Differential Pulse Splitter

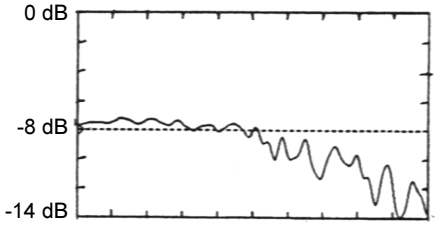


The Model 5315A BALUN is a broadband differential pulse splitter. A signal fed into the 50 Ω input is split equally into two 50 Ω outputs. One output is the same polarity as the input, while the other output is inverted in polarity. The 5315A BALUN has a very fast 21 ps risetime and a bandwidth of 17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

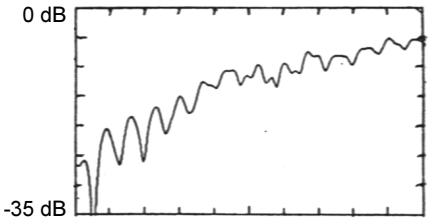
Risetime (10%-90%)	21 ps typical, 25 ps max.	**Delay**	0.9 ns
Bandwidth (-3 dB)	17 GHz typical	**Diff. Delay Balance**	±2 ps max.
Low Frequency Cutoff	200 kHz (-3 dB)	**Diff. Balance**	< 0.5 dB, t < 500 ps 1 dB, t > 1 ns
Insertion Loss	8 dB, nominal	**Max. Input**	0.75 Watts
Impedance	50 Ω	**Connectors**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



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



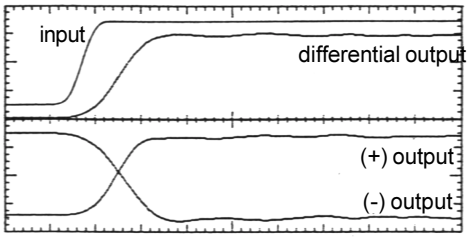
2 dB/div and 2 GHz/div
Insertion Loss: Input to (-) output



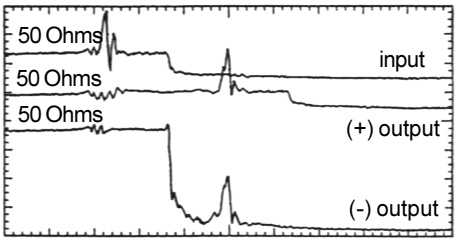
5 dB/div and 2 GHz/div
Return Loss

Ordering Information

Model Number
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-9.

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