

101289C

ID500-500-2.5W-500 MHz Dispersive Delay Line 500 MHz Bandwidth

Specifications

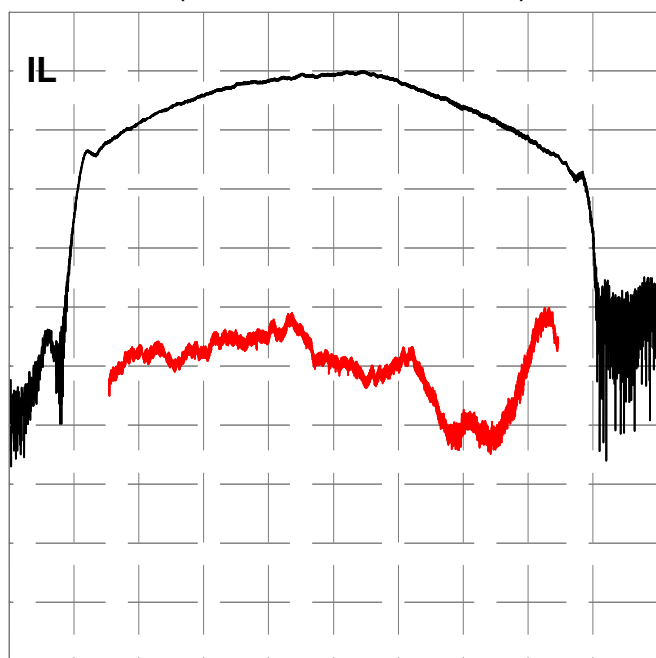
Parameter	Symbol	Min	Typical	Max	Unit
Center Frequency	F_0		500		MHz
Bandwidth	B		500		MHz
Dispersion	T		2.5		μsec
Delay	T_0	3.1	3.115	3.14	μsec
Insertion Loss	IL		34.4	37	dB
Slope	S_0	-0.0051	-0.005	-0.0048	$\mu\text{s}/\text{MHz}$
Pulse Width at -3 dB			0.0023	0.0025	μsec
Sidelobes for $ t - T_0 < T$			-23.1	-13	dB
Time Spurious for $ t - T_0 > T$			-61	-56	dB
Substrate Material		YZ-LN			

Notes

- Center Frequency (F_0) and Bandwidth (B) are defined, not measured. Dispersion (T) is defined as $|B * S_0|$.
- Insertion Loss is the minimum loss for $|f - F_0| < .5B$
- Delay and Slope determined by best fit quadratic pulse in $|f - F_0| < .5B$.
- Specifications are at 22 °C only. Unit will operate undamaged from -54 °C to 125 °C with shifts $dF_0 = -x * F_0$, $dT_0 = x * (T_0 + S_0 * F_0)$, $dS_0 = x * 2 * S_0$, where $x = 94E-6 * (\text{temperature} - 22 \text{ °C})$

Typical Performance

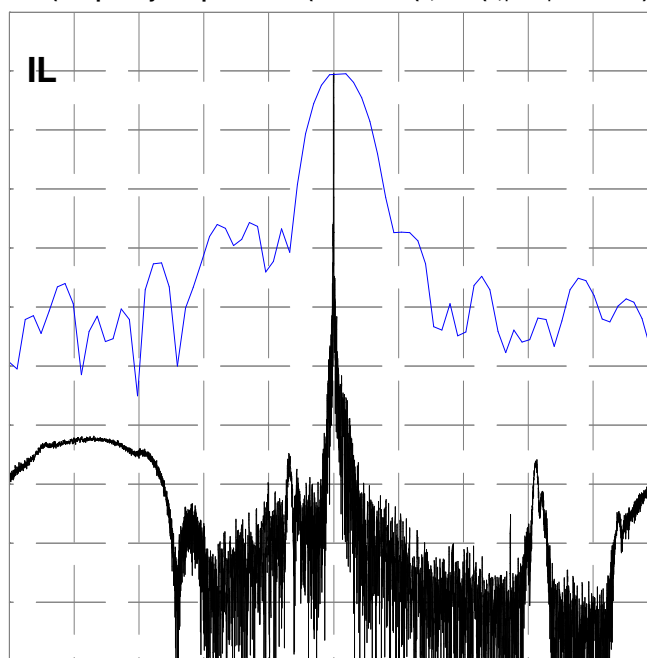
Frequency Response
(Best Fit Quadratic Phase Removed)



10 dB/div, 10 deg/div, 65.000 MHz/div

Compressed Pulse Response

FFT(Frequency Response * Cos(0.5 * PI * MIN(1, MAX(0, |f - F0| * 6.7 / B - 3.3))))^2

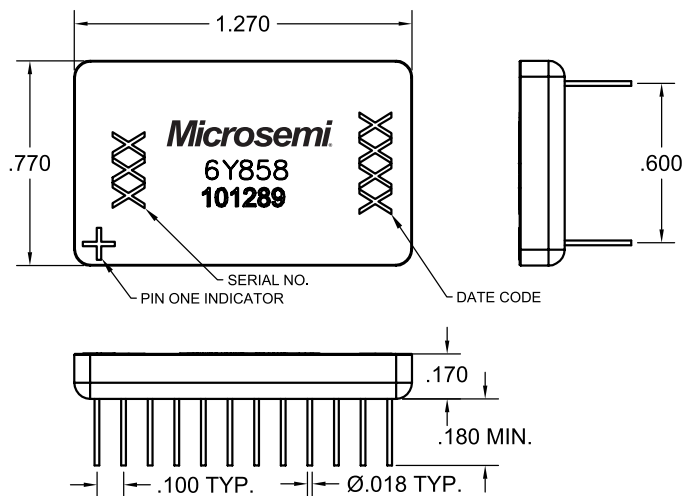


10 dB/div, 0.800 us/div, 0.004 us/div

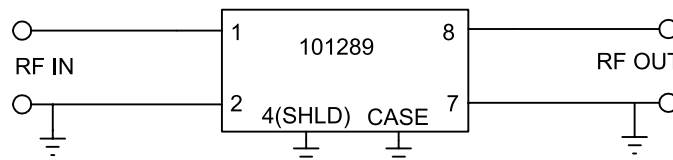
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Package Outline



Matching



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