

100802C

ID32-1.25-40R 32 MHz Dispersive Delay Line 32 MHz Dispersive Delay Line

Specifications

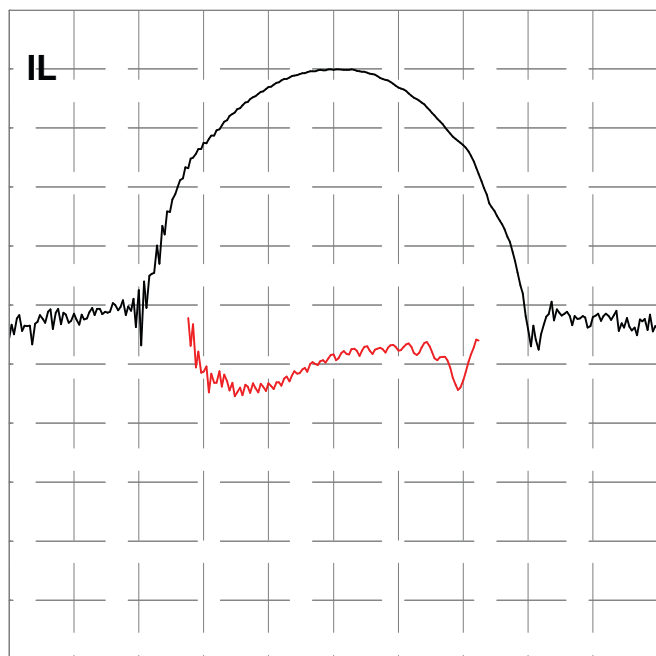
Parameter	Symbol	Min	Typical	Max	Unit
Center Frequency	F_0		32		MHz
Bandwidth	B		1.25		MHz
Dispersion	T		40		μsec
Delay	T_0	24.5	25.126	25.7	μsec
Insertion Loss	IL		31	34	dB
Slope	S_0	-32	-31.9	-31.6	$\mu\text{s}/\text{MHz}$
Pulse Width at -3 dB			0.985	1.015	μsec
Sidelobes for $ t - T_0 < T$			-35.8	-25	dB
Time Spurious for $ t - T_0 > T$			-52	-46	dB
Substrate Material		STQ			

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 $x = 3E-8 * (\text{temperature} - 22 \text{ }^\circ\text{C})^2$

Typical Performance

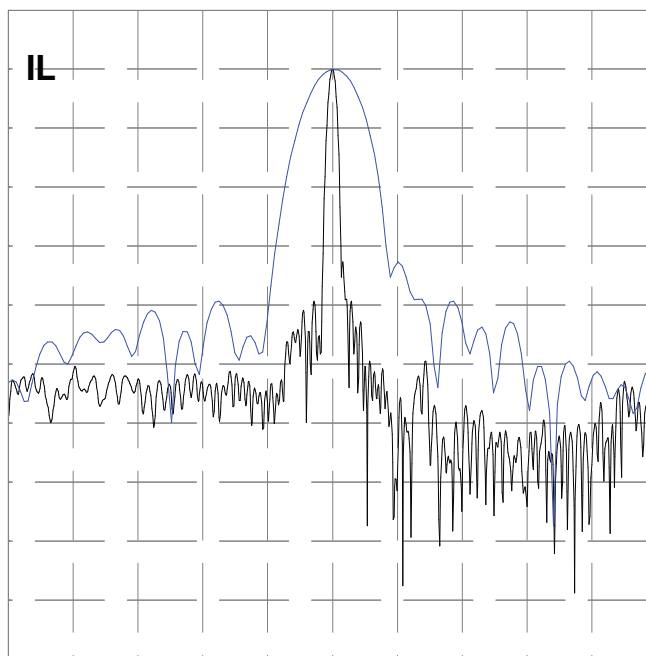
Frequency Response
(Best Fit Quadratic Phase Removed)



10 dB/div, 10 deg/div, 0.250 MHz/div

Compressed Pulse Response

FFT(Frequency Response * Cos(0.5 * PI * MIN(1, MAX(0, |f - F0| * 2.0 / B - 1.0)))^2)

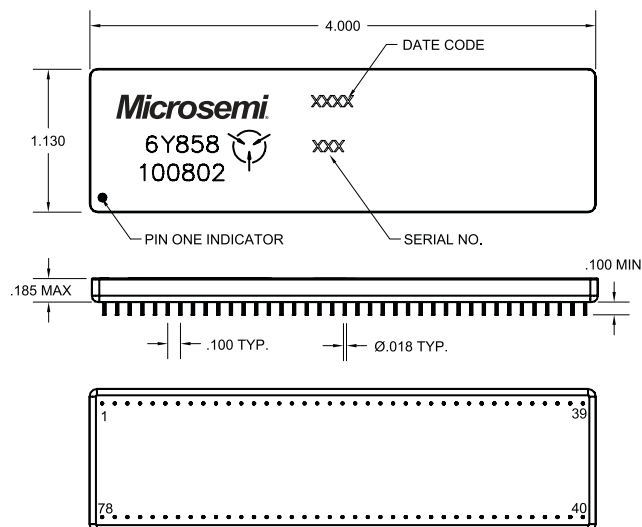


10 dB/div, 10.000 us/div, 1.600 us/div

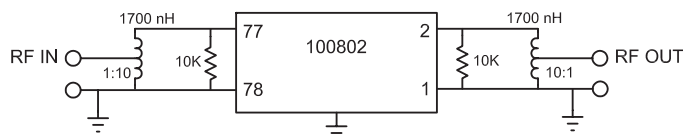
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Package Outline



Matching



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