

# 100907C

RD183-82.5-10W- 183 MHz Dispersive Delay Line 82.5 MHz Bandwidth

## Specifications

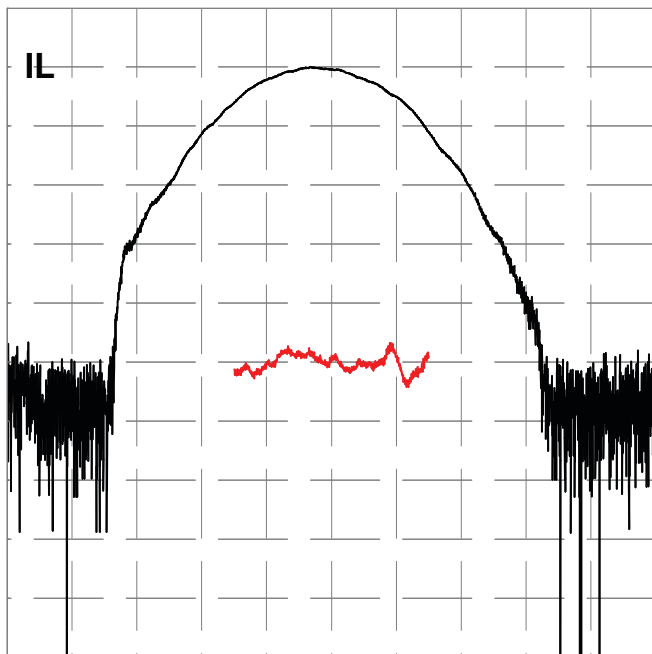
Parameter	Symbol	Min	Typical	Max	Unit
Center Frequency	$F_0$		183		MHz
Bandwidth	B		82.5		MHz
Dispersion	T		10		$\mu\text{sec}$
Delay	$T_0$	7.52	7.547	7.56	$\mu\text{sec}$
Insertion Loss	IL		42.6	45	dB
Slope	$S_0$	-0.122	-0.121	-0.12	$\mu\text{s}/\text{MHz}$
Pulse Width at -3dB			0.0166	0.0169	$\mu\text{sec}$
Sidelobes for $ t - T_0  < T$			-34.5	-28	dB
Time Spurious for $ t - T_0  > T$			-69	-65	dB
Substrate Material		128YX-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  $x = 75E-6 * (\text{temperature} - 22\text{°C})$

## Typical Performance

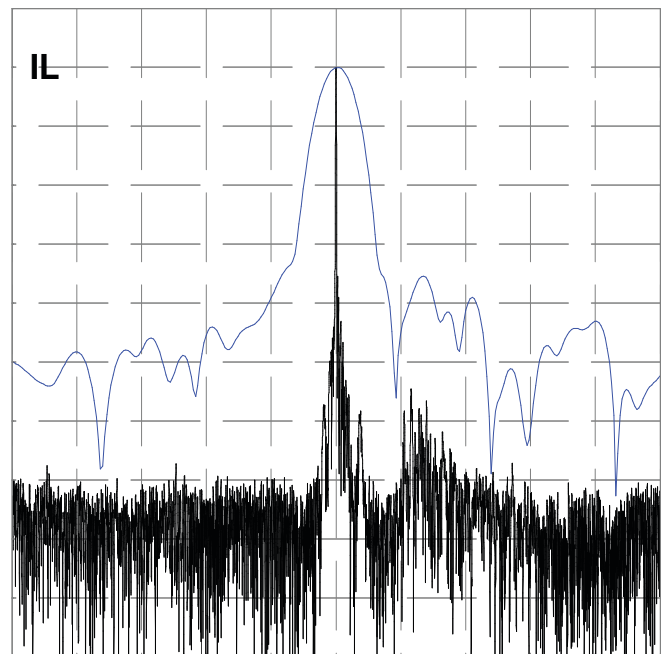
**Frequency Response**  
(Best Fit Quadratic Phase Removed)



10 dB/div, 10 deg/div, 15.000 MHz/div

**Compressed Pulse Response**

FFT(Frequency Response \* Cos(0.5 \* PI \* MIN(1, MAX(0, |f - F0| \* 2.4 / 82.5 - 1.2))) ^ 2)

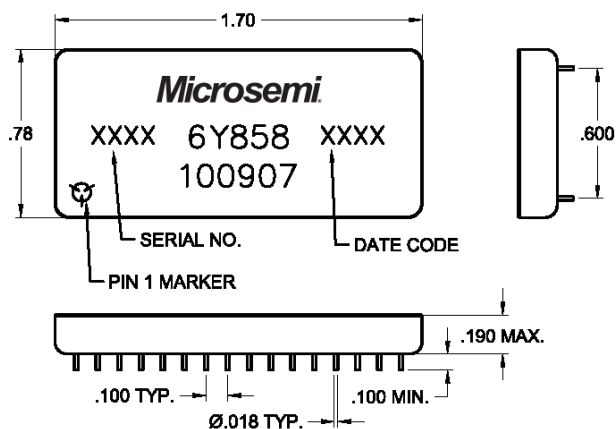


10 dB/div, 2.133 us/div, 0.040 us/div

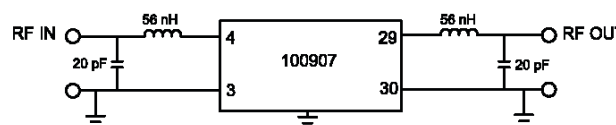
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## Package Outline



## Matching



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