

DESCRIPTION

Aeroflex / Metelics MLPNC-7103S1 is a monolithic Non-Linear-Transmission-Line (NLTL) Comb Generator which offers outstanding Phase Noise Performance. This high performance Comb Generator operates over specified ranges of input Frequency/Power.

PRELIMINARY



FEATURES

- Ultra-Low Phase Noise
- Input Frequency from 600 MHz to 1500 MHz
- Input Power from 18 dBm to 24 dBm
- Output Harmonics to 15 GHz
- SMT580 Surface Mount & SMA800 Packages
- No Bias or Tuning Required

ENVIRONMENTAL RATINGS:

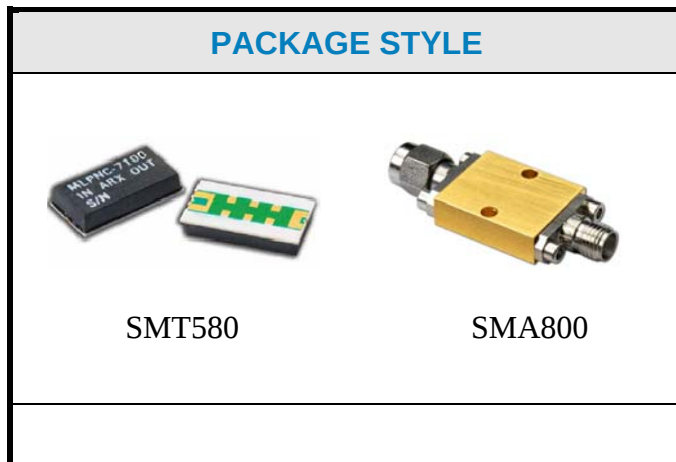
Maximum Input Power 27 dBm
 Operating Temperature -45 to +85 °C
 Storage Temperature -55 to +125 °C
 Temperature Cycling -55 to +125 °C

ELECTRICAL CHARACTERISTICS $T_C = +25^\circ\text{C}$

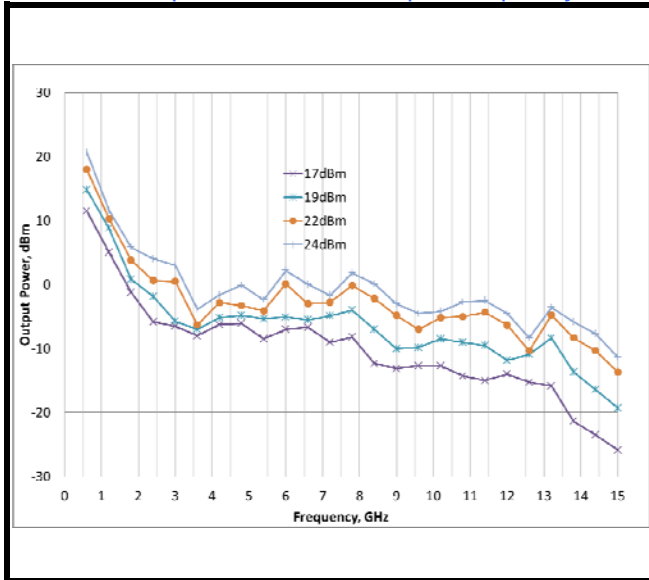
OPERATING PARAMETERS				
Parameter	Recommended Input			Comments:
	Min	Typical	Max	
Frequency	600 MHz	1000 MHz	1500 MHz	The model 7103S1 does not abruptly stop working at the recommended min and max Frequencies and Powers. The conversion efficiency drops outside recommended limits.
Power (dBm)	18 dBm	22 dBm	24 dBm	

Tested Performance Limits ^[1]				
Inputs	Output Harmonics			Comments:
	Up to 4 GHz	4 to 8 GHz	8 to 15 GHz	
600 MHz 22dBm	> -10 dBm	> - 8 dBm	> -20 dBm	These are the harmonic output test limits used for production screening.
1000 MHz 22 dBm	> 0 dBm	> - 2 dBm	> - 14 dBm	
1500 MHz 22 dBm	> 6 dBm	> 0 dBm	> - 14 dBm	

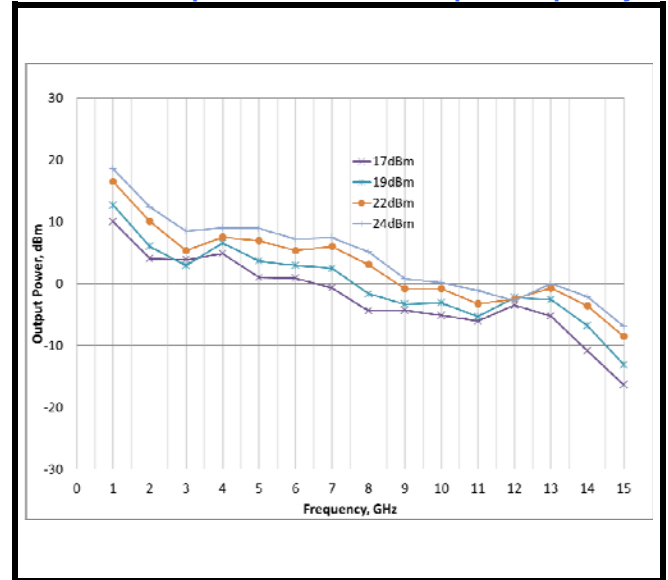
1. Contact the factory for specific input frequency and/or input power applications



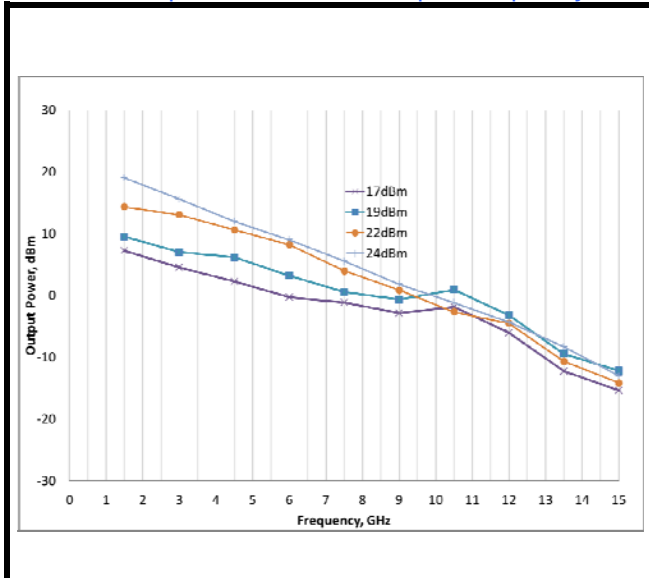
Harmonic Output with 600 MHz Input Frequency



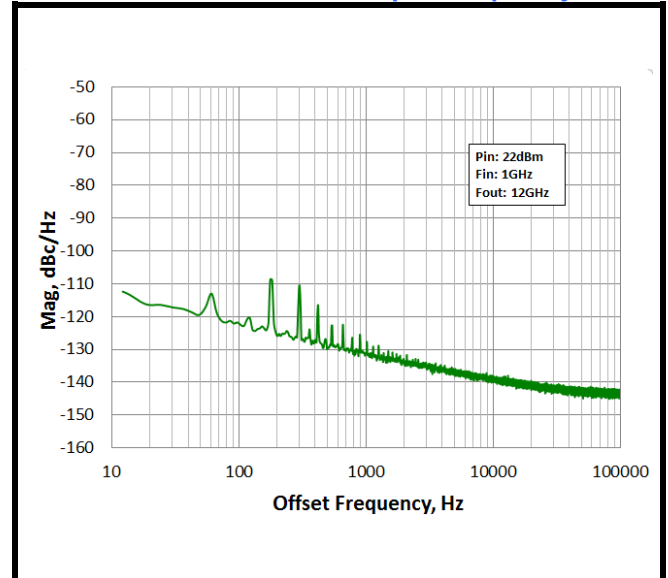
Harmonic Output with 1000 MHz Input Frequency



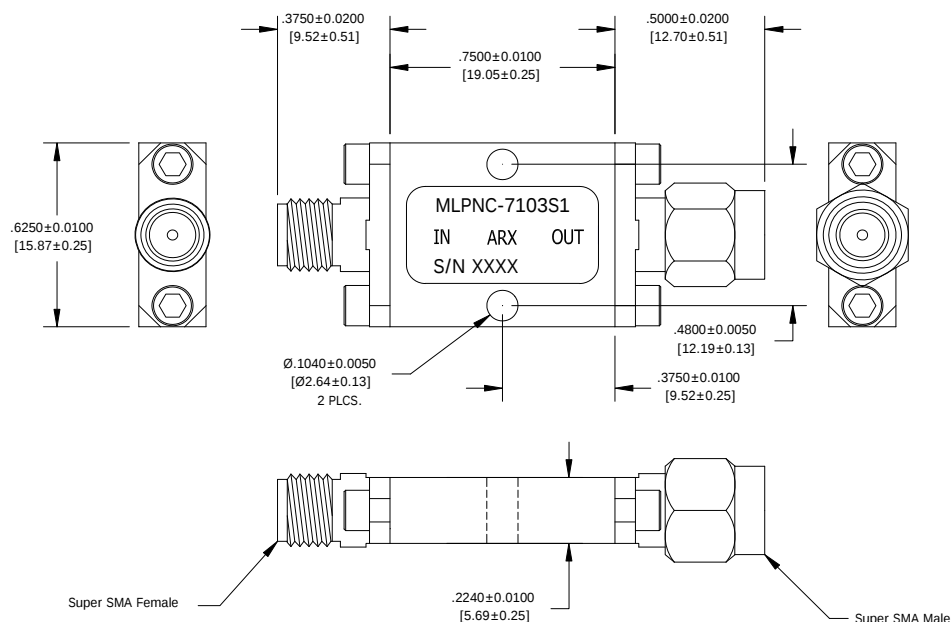
Harmonic Output with 1500 MHz input Frequency



Phase Noise with 1000 MHz Input Frequency

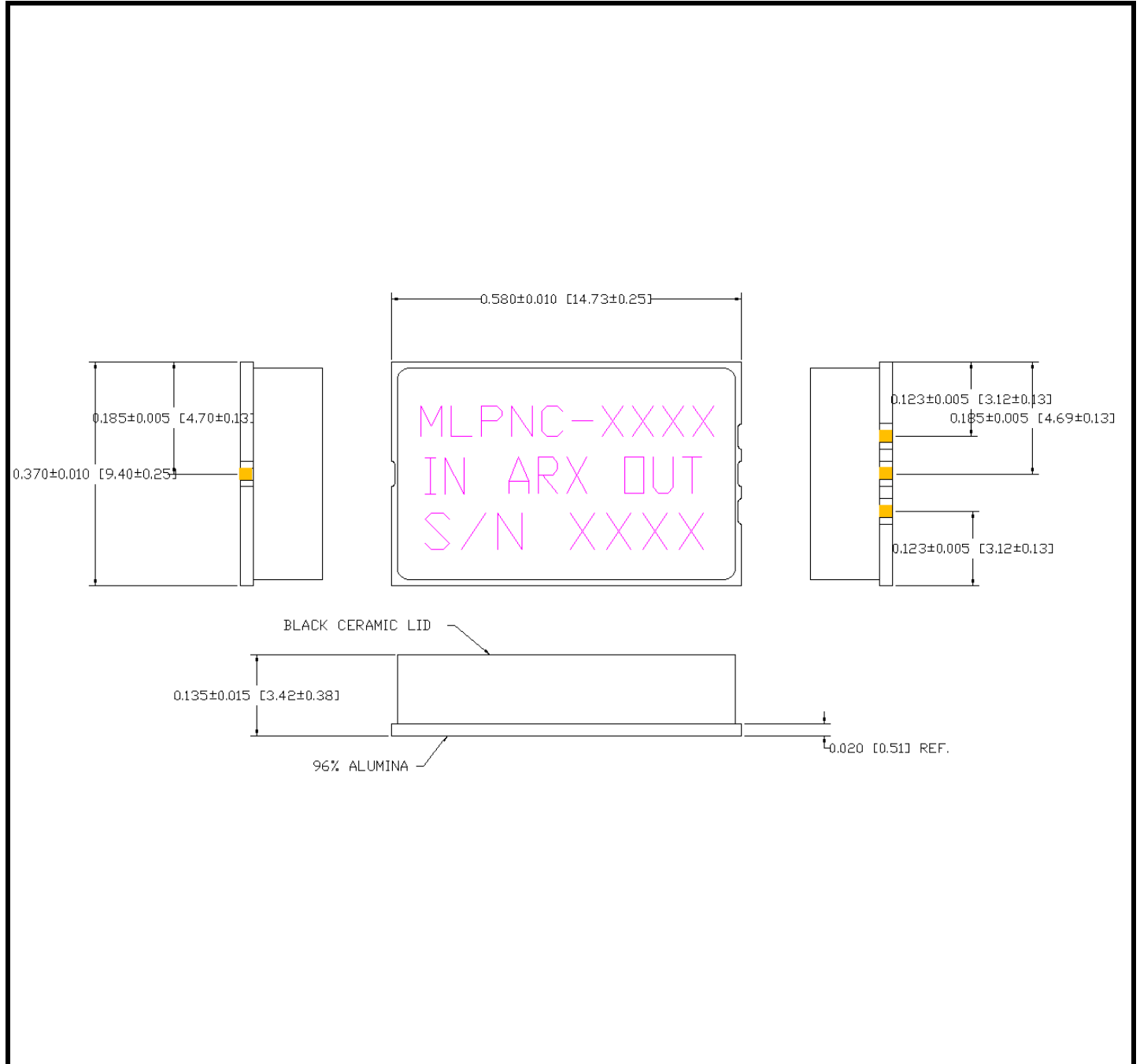


SUPER SMA HERMETIC PACKAGE OUTLINE AND DIMENSIONS



SMA HERMETIC PACKAGE OUTLINE

SMT580 PACKAGE OUTLINE, TOP AND SIDE VIEW



SMT580 PACKAGE OUTLINE, BOTTOM VIEW

