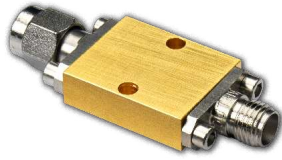
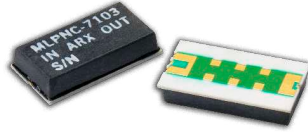


# MLPNC-7103

## NLTL COMB GENERATOR



SMA800  
Hermetic



SMT680



### DESCRIPTION:

Aeroflex / Metelics MLPNC-7103 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 and is currently available in two package styles.

### FEATURES:

- Ultra-Low Phase Noise
- Input Frequency from 800 to 1300 MHz
- Input Power from 21 to 23 dBm
- No Bias Required
- Output Harmonic up to 30 GHz
- SMA800 Hermetically Sealed Package
- SMT680 Surface Mount Package

### ENVIRONMENTAL RATINGS:

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

### ELECTRICAL SPECIFICATIONS: $T_c = +25^\circ\text{C}$

Operating Parameters			
Parameter	Recommended Input		
	Min	Typical	Max
Frequency	800 MHz	1000 MHz	1300 MHz
Power (dBm)	21 dBm	22 dBm	23 dBm

#### Comments:

The model MLPNC-7103 does not abruptly stop working outside the minimum and maximum limits. The conversion efficiency drops outside recommended limits.

Tested Performance Limits*					
Input/Power	Output Harmonics				
	@ 6 GHz	@ 12 GHz	@ 18 GHz	@ 24 GHz	@ 30 GHz
1000 MHz/ 22 dBm	> - 5 dBm	> - 8 dBm	> - 15 dBm	> - 18 dBm	> - 20 dBm

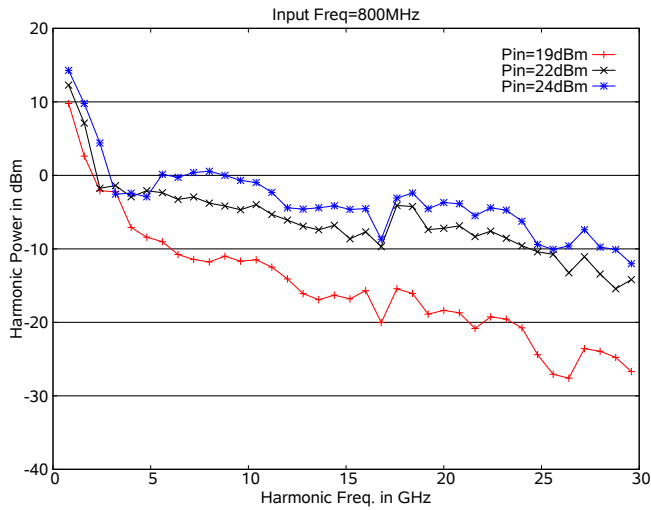
#### Comments:

These are the harmonic output test limits used for production screening.

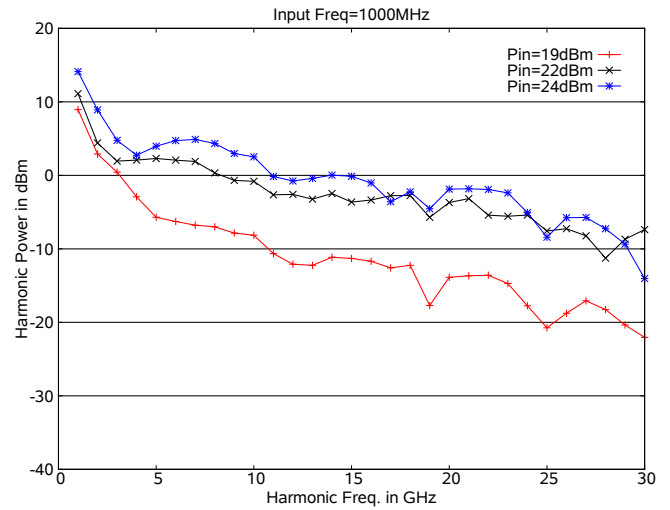
\* Contact the factory for specific input frequency and/or input power applications.



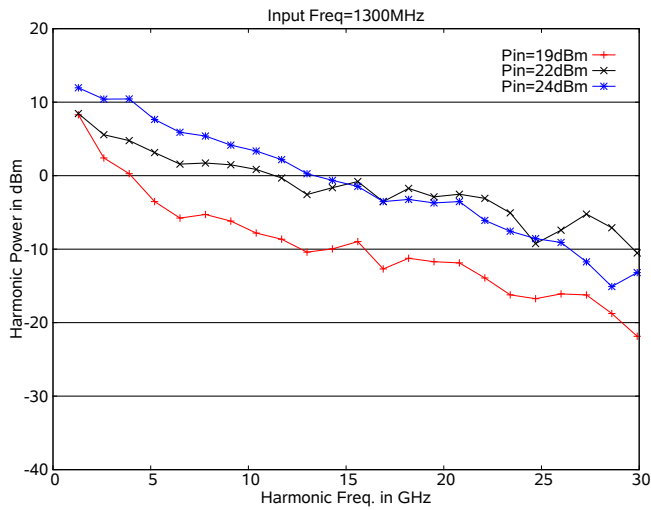
### Harmonic Output with 800 MHz Input Frequency



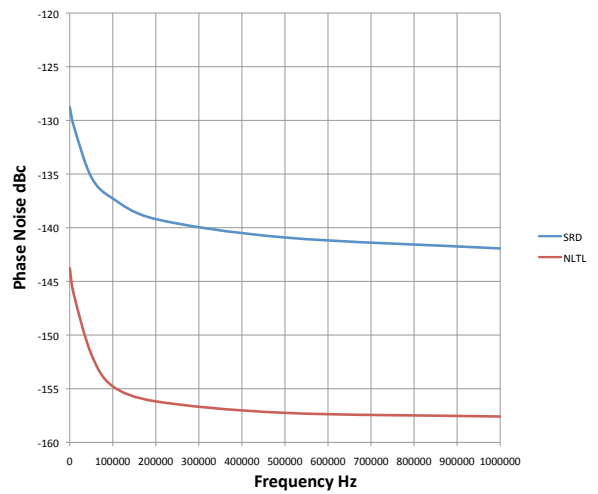
### Harmonic Output with 1000 MHz Input Frequency



### Harmonic Output with 1300 MHz input Frequency

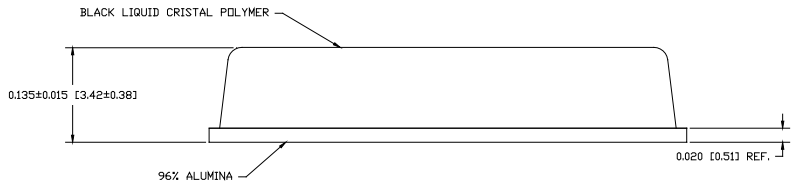
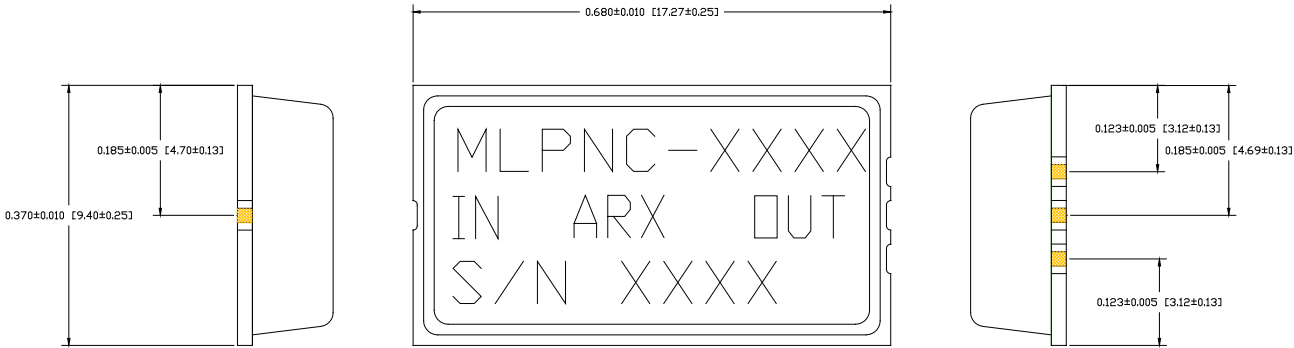


### Phase Noise 22 dBm NLTL, 24 dBm SRD & 500 MHz Input Frequency



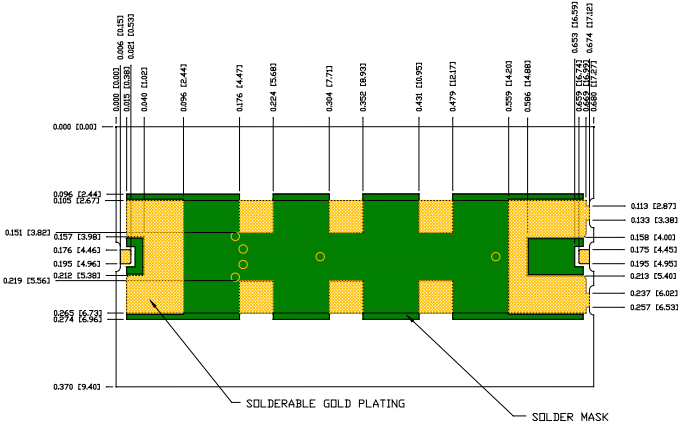
SMT680 PACKAGE OUTLINE AND DIMENSIONS

TOP VIEW



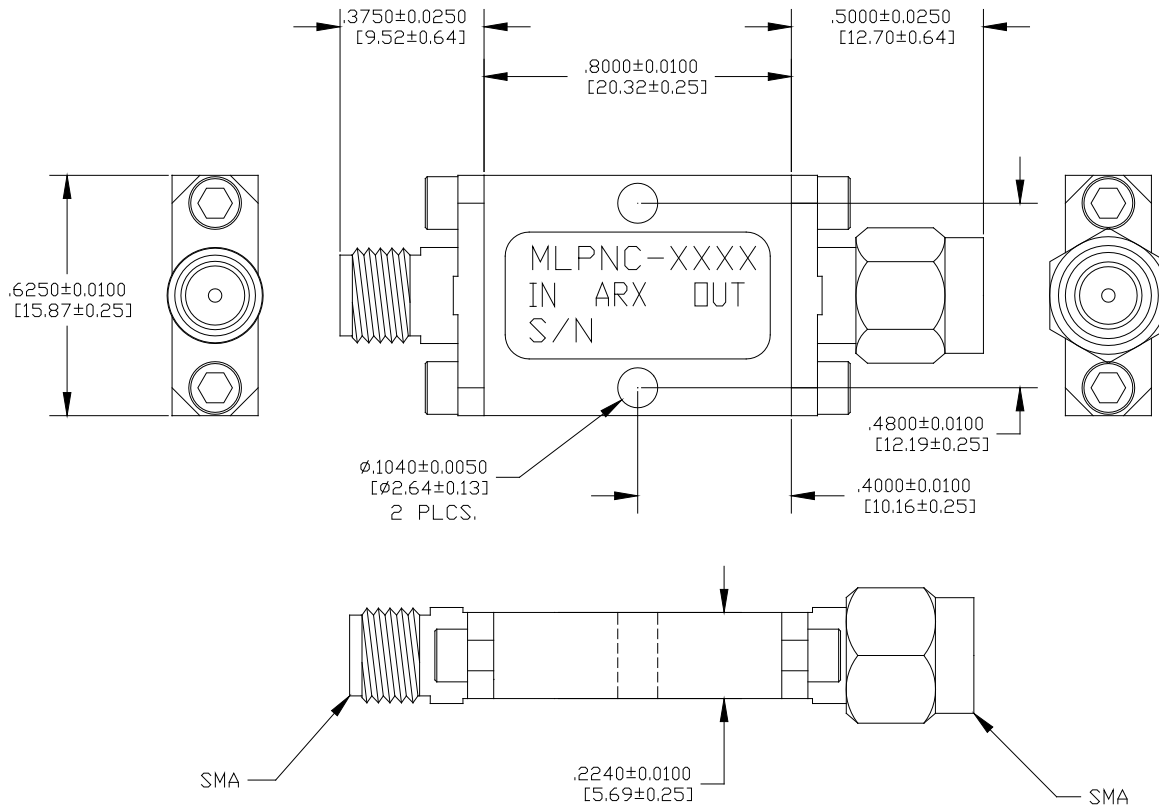
Revision Date: 7/18/2012

SMT680 PACKAGE OUTLINE



BOTTOM VIEW

SUPER SMA800 HERMETIC PACKAGE OUTLINE AND DIMENSIONS



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Our passion for performance is defined by three attributes represented by these three icons: solution-minded, performance-driven and customer-focused.