

## DESCRIPTION

Aeroflex / Metelics MLPNC-7102S1 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 300 MHz to 700 MHz
- Variable input Power from 18 – 24 dBm
- Output Harmonics to 12 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

## PACKAGE STYLES



SMT580



SMA800

## ELECTRICAL CHARACTERISTICS<sub>T<sub>C</sub> = +25°C</sub>

| OPERATING PARAMETERS |                   |         |         |                                                                                                                                                                   |
|----------------------|-------------------|---------|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Parameter            | Recommended Input |         |         | Comments:                                                                                                                                                         |
|                      | Min               | Typical | Max     |                                                                                                                                                                   |
| Frequency            | 300 MHz           | 500 MHz | 700 MHz | The model 7102S 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 <sup>[1]</sup> |                  |            |             |                                                                          |
|------------------------------------------|------------------|------------|-------------|--------------------------------------------------------------------------|
| Inputs                                   | Output Harmonics |            |             | Comments:                                                                |
|                                          | 0 to 4 GHz       | 4 to 8 GHz | 8 to 12 GHz |                                                                          |
| 300 MHz<br>22dBm                         | > -10 dBm        | > -15 dBm  | > -22 dBm   | These are the harmonic output test limits used for production screening. |
| 500 MHz<br>22 dBm                        | > -2 dBm         | > -5 dBm   | > -15 dBm   |                                                                          |
| 700 MHz<br>22 dBm                        | > 0 dBm          | > -6 dBm   | > -15 dBm   |                                                                          |

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