

# DIELECTRIC RESONATOR OSCILLATOR

**Model 513142**

**5000 - 6000 MHz**

## Features

- Low Noise Bipolar Transistor
- Rugged Construction for Extreme Environmental Conditions
- High Frequency Stability
- Mechanically Tuned

## Specifications

| CHARACTERISTIC                               | TYPICAL<br>Ta = +25 °C | MIN/MAX<br>Ta = -55°C to +85 °C |
|----------------------------------------------|------------------------|---------------------------------|
| Frequency                                    | 5000 - 6000 MHz        | 5000 - 6000 MHz                 |
| Output Power (dBm)                           | +13.0                  | +10.0 Min.                      |
| Power Flatness (dBm)                         | +/- 1.5                | +/- 3.0                         |
| Frequency Stability<br>(ppm)/ °C             | 4                      | 3 to 5                          |
| Harmonics (dBc)                              | -20                    | -15 Max.                        |
| Spurious (dBc)                               | -80                    | -80 Max.                        |
| Phase Noise (5000 MHz)<br>@ 100 KHz (dBc/Hz) | -128                   | -126 Max.                       |
| Load VSWR                                    | 1.5:1                  | 2.0:1 Max.                      |
| Power                                        | Vdc<br>mA              | +15 to +20<br>90 Max.           |

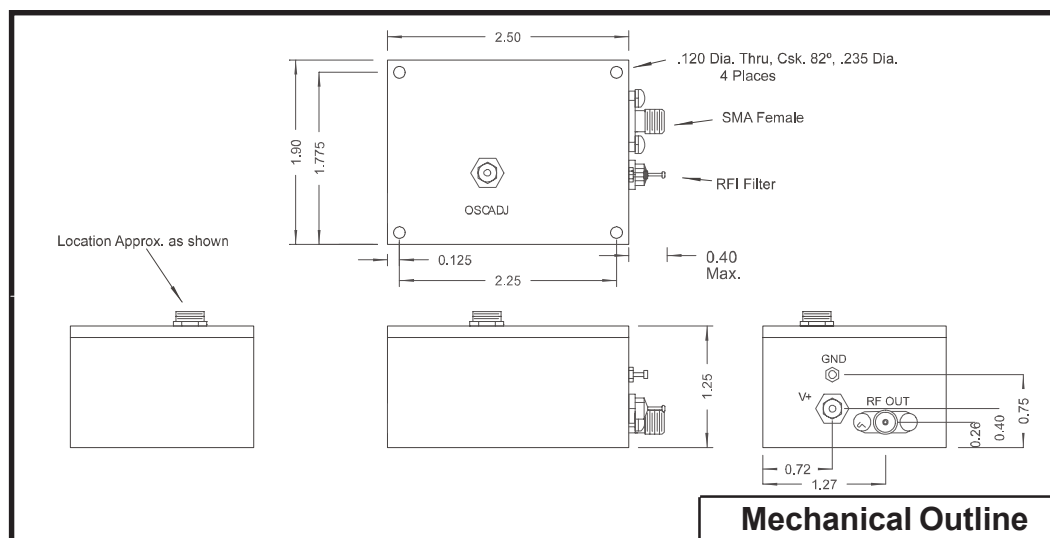
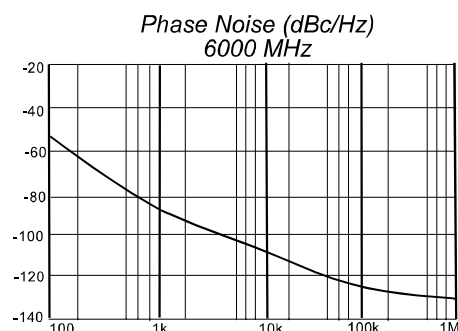
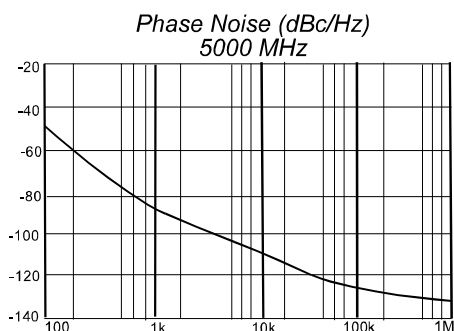
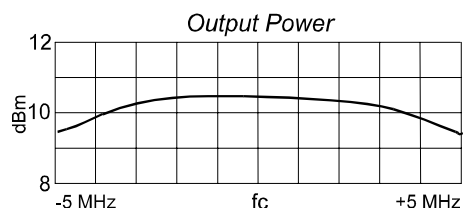
## Absolute Maximum (No Damage) Ratings

Ambient Operating Temperature ..... -55°C to +100 °C  
 Storage Temperature ..... -62°C to +125 °C  
 Case Temperature ..... +125 °C  
 DC Voltage ..... +24 Volts  
 Maximum DC Tuning Voltage ..... +20 Volts  
 Minimum DC Tuning Voltage ..... 0 Volts

NOTE: Care should always be taken to effectively ground the case of each unit.

## Typical Performance Data

| Phase Noise | Typical  | Typical  |
|-------------|----------|----------|
| Offset      | 5000 MHz | 6000 MHz |
| 1 kHz       | -87      | -85      |
| 10 kHz      | -109     | -108     |
| 100 kHz     | -128     | -126     |



**Mechanical Outline**



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