

## Dynamic Engineers Inc.

2550 Gray Falls Dr., Suite#128, Houston, TX, 77077 USA TEL: 1-281-870-8822 EMAIL: Sales@DynamicEng.com

### **Features and Benefits**

Frequency range: 40-150MHz Supply voltage: 3.3V Steady current: 35mA Max Output waveform: CMOS Holdover: ±0.32PPM Phase noise@10KHz: -148dBc/Hz Operating temperature: -40°C to +85°C Size: 14.5x9.6x6.5mm

#### **Typical Applications**

Time Synchronization Microwave Communication Test & Measurement Telecom Systems Satellite Communication

#### **Description**

TCXO914BM-STR3 is the high stability stratum3 TCXO. The Holdover can be less than  $\pm 0.32$ PPM. It can be widely used in the portable communication devise.

#### **Mechanical Drawing & Pin Connections**

#### Drawing No: MD220035-1



**Bottom View** 



Dynamic Engineers, Inc.

Rev. 1

Dynamic Engineers reserves the right to make changes to the company datasheet(s) along with other information contained inside, such as data tables and araphs without notification to potential customers who may have earlier revisions in their possession.



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# **Specifications**

| Oscillator<br>Specification | Sym | Condition   | Value |      |       | Unit   | Note  |
|-----------------------------|-----|---|-------|------|-------|--------|-------|
|                             |     |   | Min.  | Тур. | Max.  |        |       |
| Operational Frequency       | fo  | Standard Frequency:<br>50M, 92.16M, 98.304M,<br>100M, 120MHz                    | 40    |      | 150   | MHz    |       |
| RF Output                   |     |   |       |      |       |        |       |
| Output Waveform             |     |   | CMOS  |      |       |        |       |
| Load                        |     |   |       | 15   |       | pF     |       |
| Output Level High           |     |   | 2.97  |      |       | V      |       |
| Output Level Low            |     |   |       |      | 0.33  | V      |       |
| Duty Cycle                  |     |   | 45    |      | 55    | %      |       |
| Rise/Fall Time              |     |   |       |      | 3     | nSec   |       |
| Power Supply                |     |   |       |      |       |        |       |
| Voltage                     | Vcc |   |       | 3.3  |       | V      |       |
| Current                     |     | At maximum supply<br>voltage  |       |      | 35    | mA     |       |
| Frequency Stability         |     |   |       |      |       |        |       |
| Overall                     |     |   |       |      | ±4.6  | ppm    | Note1 |
| Holdover                    |     | Over 24 Hours   |       |      | ±0.32 | ppm    |       |
| Initial Tolerance           |     | At 25°C   |       |      | ±1.0  | ppm    |       |
| Phase Noise                 |     | @10Hz   |       |      | -87   | dBc/Hz |       |
|                             |     | @100Hz  |       |      | -117  |        |       |
|                             |     | @1KHz   |       |      | -141  |        |       |
|                             |     | @10KHz  |       |      | -148  |        |       |
|                             |     | @100KHz   |       |      | -155  |        |       |
|                             |     | @1MHz   |       |      | -160  |        |       |
| Environmental Conditions    |     |   |       |      |       |        |       |
| Operating temperature range |     | -40°C to +85°C  |       |      |       |        |       |
| Storage temperature range   |     | -40°C to +105 °C  |       |      |       |        |       |
| Vibration Test              |     | MIL-STD-883 2007 Condition A, JESD22-B103 Condition 1. 10~2000Hz, 1.52mm, 20G,  |       |      |       |        |       |
|                             |     | each axis for 4hrs  |       |      |       |        |       |
| Thermal Shock               |     | MIL-STD-883 1010 Condition B, JESD22-A104 Condition B55°C, 125°C; soak time is  |       |      |       |        |       |
|                             |     | 10 mins, with total 200 cycles  |       |      |       |        |       |
| Mechanical Shock            |     | MIL-STD-883 2002 Condition B, JESD22-B104 Condition B. 1500G, half-sine, 0.5ms, |       |      |       |        |       |
|                             |     | each axis for 3 times   |       |      |       |        |       |

Note1: Frequency stability includes frequency tolerance@25°C and frequency stability vs. operating temperature range and voltage variance and 20 years aging.