RELIABILITY TEST PROCEDURES FOR ECS-TXO-2016 Series



NO. TEST NAME TEST PROCEDURES REQUIREMENTS

| 1 | sноск | Drop 3 times from the height of 100cm onto hard wooden board. | Frequency Drift ±1 PPM Max. |
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| 2 | VIBRATION | Vibration Frequency: 10 to 55Hz, 1.5mm, full wave Cycle: 2 min. Direction: X.Y.Z. Time: 2 hours in each direction | Frequency Drift ±1 PPM Max. |
| 3 | STORAGE IN HIGH TEMPERATURE | +85 ±2°C for 500 hours. | Frequency Drift ±1 PPM Max. |
| 4 | STORAGE IN LOW TEMPERATURE | -40 ±2°C for 500 hours. | Frequency Drift ±1 PPM Max. |
| 5 | RESISTANCE TO SOLDERING HEAT | Pass through reflow for 10s (Max.) which is pre-heated at a temperature of 160°C ± 10°C and 240°C ± 5°C | Frequency Drift ±1 PPM Max. |
| 6 | HUMIDITY | + 60 ± 2°C in humidity 95% for 500 hours. | Frequency Drift ±1 PPM Max. |
| 7 | THERMAL SHOCK | Supply 500 cycles as follows: Temperature shift shall be done within 30 sec55 ±2°C +125 ±2°C (30 min) <> (30 min) | Frequency Drift ±1 PPM Max. |
| 8 | TEMPERATURE CYCLE | Supply 100 cycles as follows: +125 +5 -2 °C 30 min. +25 ±5 °C +25 ±5 °C 10 min. 10 min. -55 +3-5 °C 30 min. 1 Cycle | Frequency Drift ±1 PPM Max. |
| 9 | SEALING TIGHTNESS MIL-STD 202F METHOD 112D TEST C AND D | 1) Dipping in Florinert at: +125 ±5°C for 5 min. (Gross Leak) | There are no visual abnormalities. |
| | | Leak rate shall be measured by using: Helium leak Detector (Fine Leak) | There are no visual abnormalities. |
| 10 | Mean Time Between Failures (MTBF) | Ea x (1/T1-1/T2) / K MTBF (25°C) = <u>HsXe°Ce</u> π | 16396600 Hours |