



6 5 4 3 2 1  
 12v out gnd ecc vref oven monitor  
 13+-2 0-8v 8v ok: >3.5v not ok <1v

# 10MHZ ISOTEMP Reserch OCXO 134-10 CRYSTAL OSCILLATOR

## 1. OUTPUT

1.1. Frequency	10.000 MHz
1.2. Wave form	Sine wave
1.3. Level	2 Vp-p $\pm 10\%$ into 50 W
1.4. Load	50 W $\pm 5\%$
1.5. Harmonics	< -25 dBc
1.6. Spurious	< -60 dBc

## 2. STABILITY

2.1. Ambient	< $\pm 5 \times 10^{-9}$ from -30°C to +60°C (referenced to +25°C)
2.2. Aging	
a. Daily	
i. After 30 days	< $\pm 1 \times 10^{-9}$
ii. After 90 days	< $\pm 5 \times 10^{-10}$
b. Yearly	< $\pm 1.5 \times 10^{-7}$
c. 10 years	< $\pm 4 \times 10^{-7}$
2.3. Voltage	< $\pm 5 \times 10^{-10} / \pm 2\%$ change
2.4. Short term	< $1 \times 10^{-10} / \text{second}$ root Allan variance
2.5. Load	< $\pm 1 \times 10^{-9} / \pm 5\%$ change
2.6. Warm-up @ -30°C referenced to frequency @ 5 hours	
a. 30 minutes	< $\pm 5 \times 10^{-8}$
b. 60 minutes	< $\pm 1 \times 10^{-8}$
2.7. Phase noise	
a. @ 10 Hz	< -105 dBc
b. @ 100 Hz	< -125 dBc
c. @ 1 kHz	< -140 dBc

## 3. ELECTRICAL FREQUENCY ADJUSTMENT

3.1. Range	> $\pm 0.45$ PPM < $\pm 1.2$ PPM (At time of shipment) (Referenced to nominal frequency)
3.2. Control	0 VDC to Vref (0 VDC to +8 VDC ) or a 10 kW potentiometer connected between pins 2 and 4 with wiper connected to pin 3.
3.3. Slope	Positive
3.4. Center	Vref/2 $\pm 10\%$ of Vref (+4 VDC to +0.8 VDC)

