MTI
MTI-MILLIREN TECHNOLOGIES, INC.

204 SERIES OCXO

AS9100 / ISO9001 Certified

Features

- RoHS compliant, wide frequency range (1 MHz to 100 MHz), 36.2 mm x27.2 mm x16 mm, 5V or 12V Supply Voltage
- AT-cut or SC-cut Crystal , Stratum III or better stability, 15 pF HCMOS square wave or 50 Ohms sinewave output
- Voltage control option, Industry standard lead spacing
- Standard frequencies: 10, 12, 12.8, 13, 14.4, 16.384, 32.768, 100 MHz

Specifications

Frequency Stability vs. Temperature	±50 ppb; ±100 ppb; ±500 ppb;
Temperature Range	0° C to 70° C; -40° C to 85° C; -20° C to 70° C
Aging (after 30 days, 10MHz)	1E-07 first year
Initial Tolerance	±0.5 ppm Typical, at 25° C, Vc = 1/2 Vcc
Frequency vs. Load	±0.02 ppm Typical / ±5% load change
Frequency vs. Voltage	±0.02 ppm/V Typical
G-Sensitivity	±0.002 ppm/G, Worst direction
Inpuy Voltage (Vcc)	+5 V ± 5% ; ± 5%; +12 V ± 5% ; +15 V ± 5% ;
Input Current (Max) Steady state:	120 mA at 12V; 200 mA at 5V (25° C)
	Start-up: 250 mA at 12V; 500 mA at 5V
Warm-up Time	3 minutes maximum, to ±0.1 ppm accuracy

Electrical Tuning

EFC Range	±5 ppm/AT-cut, ±0.7 ppm/SC-cut, with control voltage Vc = 0.5V to 4.5V
Linearity	±10% maximum of best straight line fit
Slope	Positive
EFC Input Impedance	100 kOhms minimum

Sinewave Output

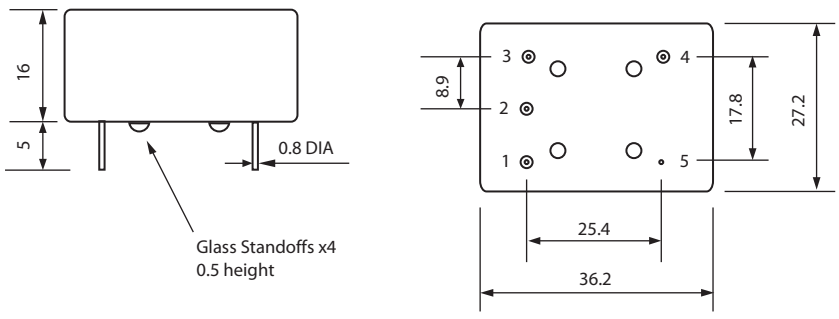
Output Waveform & Level	Sinewave, +3 dBm at 5V; +5 dBm at 12V;
Output Load	50 Ohms
Harmonics	-40 dB Typ, -30 dB minimum
Spurious	-80 dB Typ, -75 dB minimum

Phase Noise (max, 10MHz)

-115 dBc/Hz	10 Hz,
-135 dBc/Hz	100 Hz
-150 dBc/Hz	1 kHz
-155 dBc/Hz	10 kHz

HCMOS Output

Output Waveform & Level	HCMOS compatible squarewave; 40/60% duty cycleOutput
Output Load	15 pF
Logic "1" / Logic "0" Level	4.5 V / 0.5 V Typical
Rise/Fall Time (Tr/Tf)	5 ns maximum



Pin Connections
#1: Control voltage or N/C
#2: Reference voltage or N/C
#3: Vcc
#4: Output
#5: Ground/case

Lead - Kovar; Finish - Ni Plated

All dimensions are typical unless otherwise specified

Dimensions in Millimeters

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