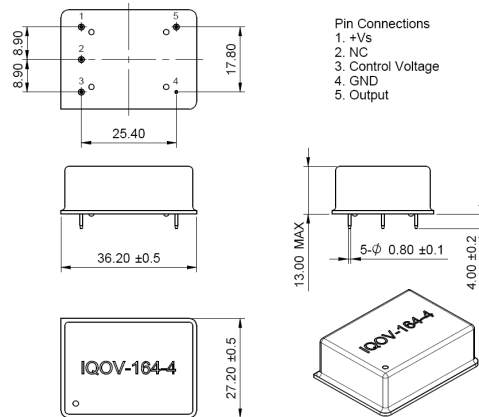




Outline (mm)



Description

- Oven controlled crystal oscillator (OCXO) with voltage control

Frequency Parameters

- Frequency: 5.0MHz to 50.0MHz
- Frequency Tolerance Max: ±100.00ppb
- Tolerance Condition: @ 25°C, 3.3V, VC=1.65V after 15mins warm-up
- Frequency Stability: ±0.20ppm to ±5.00ppm
- Ageing: ±0.5ppb max per day, ±50ppb max per year
- Frequency Tolerance (measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.65V and after 15 minutes of operation, within 30 days after ex-works): ±50ppb
- Frequency Stability: TA varied across the operating temperature range, measurement referenced to frequency observed with $f_{ref} = (f_{max} + f_{min}) / 2$, Vs=3.3V, VC=1.65V, load=50Ω and temperature variable speed less than 2°C per minute.
- Ageing: Vs, VC, TA constant measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.65V, load=50Ω and after 30 days of operation.
- Supply Voltage Variation (measurement referenced to frequency observed with TA=25°C, Vs varied from 3.13V to 3.47V, VC=1.65V and load=50Ω): ±50% of frequency stability
- Load Variation (5% load change measurement referenced to frequency observed with TA=25°C, Vs=3.3V, VC=1.65V and load=50Ω): ±50% of frequency stability
- Short Term Stability - Allan Variance (temperature stability, no EMI/EMC or other interference test after power for 1hr ref. to 25°C; 1s, using PN9000 equipment): 0.01ppb max / 1sec @ 10MHz
- Standard Frequencies: 5.0MHz, 10.0MHz, 12.80MHz, 13.0MHz, 16.3840MHz, 20.0MHz

Electrical Parameters

- Supply Voltage: 3.3V ±5%
- Current Consumption:
 Warm up (3mins max): 5W max (6W max ≤10MHz over -30+75°C, 7W max ≤10MHz over 40+85°C)
 Steady state (@ 25°C): 2W max

Frequency Adjustment

- Pulling: ±0.7ppm to ±1ppm
- Control Voltage: 1.65V ±1.65V
- Linearity: ±10% max
- Slope: Positive
- Input Impedance: 100kΩ min

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Operating Temperature Ranges

- -10 to 60°C
- -20 to 70°C
- -30 to 75°C
- -40 to 85°C

Output Details

- Output Compatibility Sine
- Drive Capability 50Ω
- Output Amplitude: 0dBm min, 10dBm max

Noise Parameters

- Phase Noise (@ 10MHz typ):
 - 125dBc/Hz @ 10Hz
 - 145dBc/Hz @ 100Hz
 - 150dBc/Hz @ 1kHz
 - 155dBc/Hz @ 10kHz
 - 155dBc/Hz @ 100kHz
 - 155dBc/Hz @ 1MHz
- Harmonic Suppression: -40dBc max
- Spurious Suppression: -75dBc max

Environmental Parameters

- Operable Temperature Range: -40 to 85°C
- Storage Temperature Range: -55 to 105°C
- ESD Level:
 - HBM, Class 2: 2000V to 4000V, JEDEC JS-001-2010
 - Machine Model, Class B: 200V to 400V, JEDEC JS-001-2010
- Shock: IEC 60068-2-27, Test Ea: 50G, 11ms duration, 1/2 sine wave, 3 times in each of 3 mutually perpendicular planes
- Vibration: IEC 60068-2-06, Test Fc: 10Hz-500Hz, 0.75mm displacement, 10G acceleration, one cycle per 30mins, 3 times in each of 3 mutually perpendicular planes, test 2hrs

Manufacturing Details

- Maximum Reflow Temperature: 260°C (30secs max)

Ordering Information

- Frequency*
- Model*
- Output Type
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
- Pulling
- (*minimum required)
- Example
 - 10.0MHz IQOV-164-4
 - Sine ±1ppb -30 to 75C 3.3V ±0.7ppm to ±1ppm

Compliance

- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Bulk Loose in bulk pack
- Pack Size: 1

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Electrical Specification - maximum limiting values 3.3V \pm 5%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
5.0MHz	50.0MHz	-10 to 60	\pm 0.2	1	1	-
		-20 to 70	\pm 0.2	-	-	-
		-30 to 75	\pm 0.5	-	-	-
		-40 to 85	\pm 1.0	-	-	-

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