

ISSUE 4; April 2016

Description

- Low EMI Spread Spectrum surface mount crystal oscillator in a ceramic package hermetically sealed with a seam sealed metal lid
- ±0.125% Centre Spread
- ±0.25% Centre Spread
- ±0.5% Centre Spread
- ±1% Centre Spread
- ±1.5% Centre Spread
- ±2% Centre Spread
- 0.25% Down Spread
- 0.5% Down Spread
- 1% Down Spread
- 2% Down Spread
- 4% Down Spread

Frequency Parameters

- Frequency: 1.0MHz to 200.0MHz
- Frequency Stability: ±25.00ppm to ±100.00ppm
- Ageing: ±3ppm max per year @ 25°C

Electrical Parameters

- Supply Voltage: 3.3V ±10%
- Internal Spread Spectrum Modulation Frequency: 30kHz to 40kHz

Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF max
- Standby Current: 10µA max
- Modulation Ratios:
 - Centre Spread ±0.125%, ±0.25%, ±0.5%, ±1%, ±2%
 - Down Spread -0.25%, -0.5%, -1%, -2%, -4%

Output Control

- Standby Operation:
 - Logic '1' to pad 1 enables oscillator output
 - Logic '0' to pad 1 disables oscillator output, the oscillator output goes to a high impedance state
 - No connection to pad 1 enables oscillator output

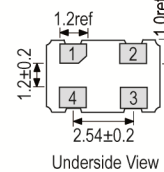
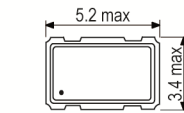
Noise Parameters

- Cycle to Cycle Jitter (1-σ): 100ps max

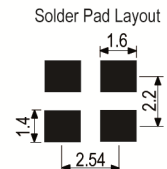
Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock: 1500G, 0.5ms, 3 times in each of 3 mutually perpendicular planes
- Vibration: 20G, 20-2000Hz, 1.52mm amplitude, 4 cycles of 20mins in 3 mutually perpendicular planes (total 4hrs)

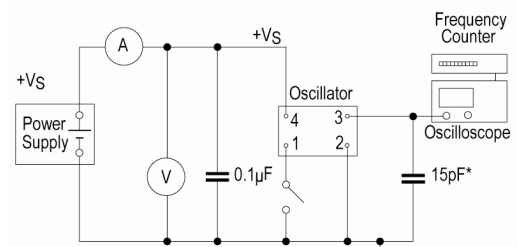
Outline (mm) ±0.125% = Centre Spread



- Pad Connections
- Standby Operation
 - GND
 - Output
 - +Vs

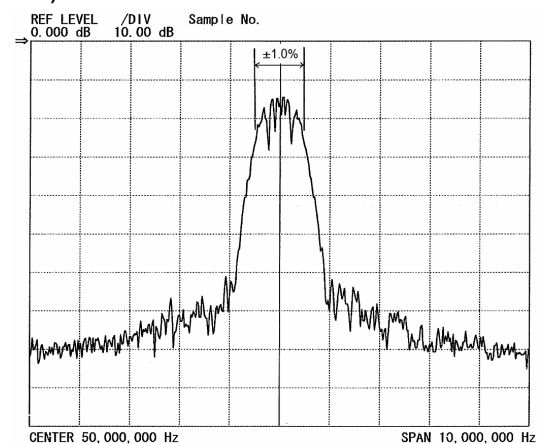


Test Circuit



* Inclusive of jigging and equipment capacitance

Example Output Spectrum (Centre Spread ±1%)



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Ordering Information

- Frequency*
 - Model*
 - Modulation Ratio*
 - Output
 - Frequency Stability (over operating temperature range)*
 - Operating Temperature Range*
 - Supply Voltage
 - (*minimum required)
- Example
 - 20.0MHz IQXS-10 ±1%
 - CMOS ±50ppm -10 to 70C 3.3V

Compliance

- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Bulk Loose in bulk pack
Pack Size: 100
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000

Electrical Specification - maximum limiting values 3.3V ±10%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1.0MHz	49.999999MHz	-10 to 70 -40 to 85	±25.0 ±25.0	20 20	10 10	40/60% 40/60%
50.0MHz	99.999999MHz	-10 to 70 -40 to 85	±25.0 ±25.0	30 30	5 5	40/60% 40/60%
100.0MHz	149.999999MHz	-10 to 70 -40 to 85	±25.0 ±25.0	35 35	4 4	40/60% 40/60%
150.0MHz	200.0MHz	-10 to 70 -40 to 85	±25.0 ±25.0	40 40	3 3	40/60% 40/60%

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