



ISSUE 12; August 2014 - RoHS 2011/65/EU

### Description

- Standard 7 x 5mm crystal oscillator
- Ceramic package with a seam sealed metal lid, hermetically sealed
- Stock parts are available
- Fast Make capability: CFPP-73 series programmable oscillators are the nearest equivalent fast make model

### Frequency Parameters

- Frequency: 500.0kHz to 156.0MHz
- Frequency Stability:  $\pm 20.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing:  $\pm 3\text{ppm}$  per year max

### Electrical Parameters

- Supply Voltage:  $3.3\text{V} \pm 10\%$

### Operating Temperature Ranges

- 0 to  $70^{\circ}\text{C}$
- $-40$  to  $85^{\circ}\text{C}$

### Output Details

- Output Compatibility: HCMOS

| Drive Capability    |          |
|---------------------|----------|
| 0.5MHz to 50.0MHz   | 50pF max |
| 50.0MHz to 80.0MHz  | 30pF max |
| 80.0MHz to 156.0MHz | 15pF max |

### Output Control

- Logic '1' ( $>70\%$  VS) to pad 1 enables oscillator output
- Logic '0' ( $<30\%$  VS) to pad 1 disables oscillator output; the oscillator output goes to the high impedance state
- No connection to pad 1 enables oscillator output
- Standby Current:  $10\mu\text{A}$  max

### Noise Parameters

- RMS Phase Jitter @125MHz: 52fs typical
- Phase Noise @125MHz (typical):
  - 10Hz -54dBc
  - 100Hz -92dBc
  - 1kHz -130dBc
  - 10kHz -149dBc
  - 100kHz -159dBc
  - 1MHz -163dBc

### Environmental Parameters

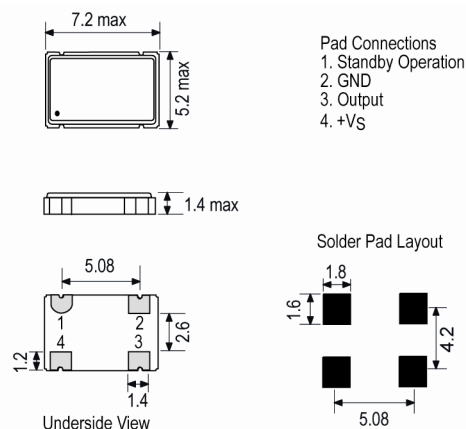
- Shock: MIL-STD-202, Method 213, Condition E
- Vibration: MIL-STD-883, Method 2007, Condition A
- Storage Temperature Range:  $-55$  to  $125^{\circ}\text{C}$

### Compliance

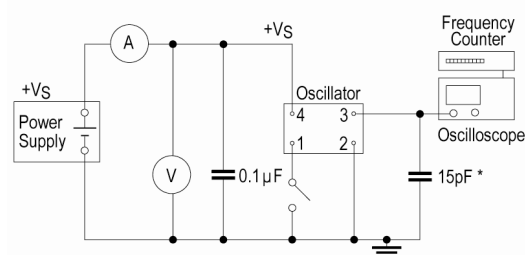
- RoHS Status: Compliant
- REACH Status: Compliant
- MSL Rating (JDEC-STD-033): Not Applicable



### Outline (mm)



### Test Circuit



\* Inclusive of jigging and equipment capacitance

### Sales Office Contact Details:

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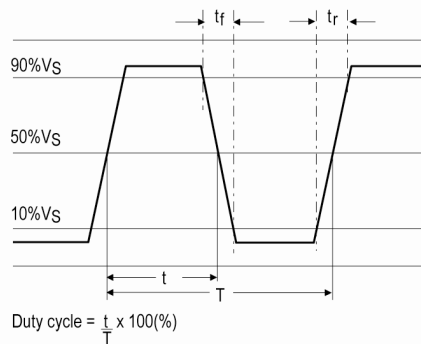
Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)



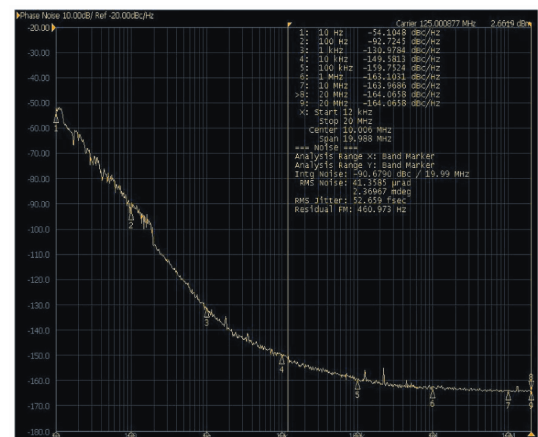
### Packaging Details

- Pack Style: R500 Tape and reel of 500pcs  
Pack Size: 500
- Pack Style: R250 Tape and reel of 250pcs  
Pack Size: 250
- 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
- Pack Style: Cutt In tape, cut from a reel  
Pack Size: 10

### Wave Form



### Phase Noise / Jitter



### 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                 | %          |
| 500.0kHz      | 19.999999MHz  | 0 to 70           | ±20.0           | 7            | 10                 | 45/55      |
|               |               | -40 to 85         | ±25.0           | 7            | 10                 | 45/55      |
| 20.0MHz       | 31.999999MHz  | 0 to 70           | ±20.0           | 12           | 10                 | 45/55      |
|               |               | -40 to 85         | ±25.0           | 12           | 10                 | 45/55      |
| 32.0MHz       | 49.999999MHz  | 0 to 70           | ±20.0           | 20           | 10                 | 45/55      |
|               |               | -40 to 85         | ±25.0           | 20           | 10                 | 45/55      |
| 50.0MHz       | 79.999999MHz  | 0 to 70           | ±20.0           | 25           | 8                  | 45/55      |
|               |               | -40 to 85         | ±25.0           | 25           | 8                  | 45/55      |
| 80.0MHz       | 99.999999MHz  | 0 to 70           | ±20.0           | 30           | 5                  | 45/55      |
|               |               | -40 to 85         | ±25.0           | 30           | 5                  | 45/55      |
| 100.0MHz      | 156.0MHz      | 0 to 70           | ±20.0           | 40           | 4                  | 45/55      |
|               |               | -40 to 85         | ±25.0           | 40           | 4                  | 45/55      |

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