

ISSUE 2; July 2016

### Description

- Standard 2 x 1.6mm crystal oscillator in a ceramic package with a seam sealed metal lid, hermetically sealed



### Frequency Parameters

- Frequency: 1.0MHz to 80.0MHz
- Frequency Stability:  $\pm 30.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing:  $\pm 5\text{ppm}$

### Electrical Parameters

- Supply Voltage:  $3.3\text{V} \pm 10\%$
- Standby Current:  $10\mu\text{A}$  max (pad 1 at logic '0')

### Operating Temperature Ranges

- 20 to 70°C
- 40 to 85°C

### Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF max

### Output Control

- Standby Operation: Logic '1' ( $\geq 70\%V_S$ ) to pad 1 enables oscillator output  
Logic '0' ( $\leq 30\%V_S$ ) to pad 1 disables oscillator output; when disabled the oscillator output goes to the high impedance state  
No connection to pad 1 enables oscillator output

### Environmental Parameters

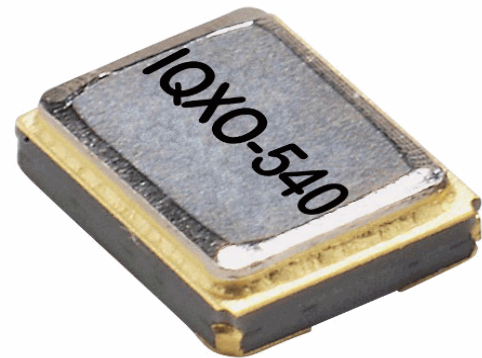
- Impact: Weight of 10G dropped to centre of part from a height of 6mm
- Vibration: IEC 60068-2-6: 1.5mm amplitude, 10Hz-55Hz, 1min in 3 mutually perpendicular planes, duration 2hrs each plane (total 6hrs)
- Storage Temperature Range: -40 to 85°C

### Ordering Information

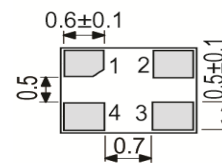
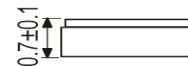
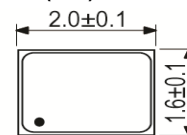
- Frequency\*
- Model\*
- Output
- Frequency Stability\*
- Operating Temperature Range\*
- Supply Voltage
- (\*minimum required)
- Example
- 10.0MHz IQXO-540
- CMOS  $\pm 50\text{ppm}$  -20 to 70C 3.3V

### Compliance

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



### Outline (mm)

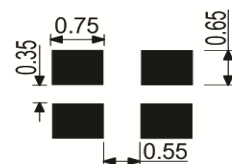


Underside View

### Pad Connections

- Standby Operation
- GND
- Output
- +Vs

### Solder Pad Layout



### Sales Office Contact Details:

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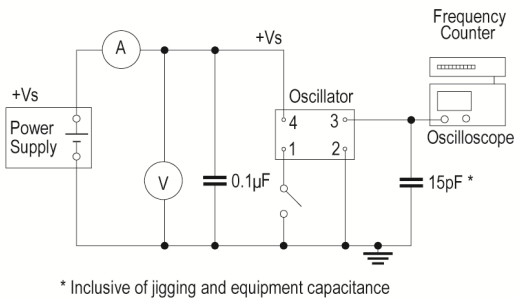
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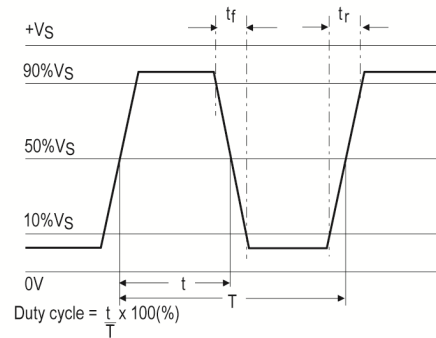
### Packaging Details

- Pack Style: Cutt      In tape, cut from a reel  
Pack Size: 1
- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000
- Pack Style: Bulk      Loose in bulk pack  
Pack Size: 100

### Test Circuit



### Wave Form



### 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        | 19.999999MHz  | -20 to 70<br>-40 to 85 | ±30.0<br>±50.0  | 4<br>4       | 5<br>5             | 45/55%<br>45/55% |
| 20.0MHz       | 39.999999MHz  | -20 to 70<br>-40 to 85 | ±30.0<br>±50.0  | 7<br>7       | 5<br>5             | 45/55%<br>45/55% |
| 40.0MHz       | 59.999999MHz  | -20 to 70<br>-40 to 85 | ±30.0<br>±50.0  | 10<br>10     | 5<br>5             | 45/55%<br>45/55% |
| 60.0MHz       | 80.0MHz       | -20 to 70<br>-40 to 85 | ±30.0<br>±50.0  | 15<br>15     | 5<br>5             | 45/55%<br>45/55% |

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