

ISSUE 5; April 2016

### Description

- Low supply current crystal oscillators  
Ceramic package with a seam sealed metal lid, hermetically sealed



### Frequency Parameters

- Frequency: 1.8MHz to 50.0MHz
- Frequency Stability:  $\pm 25.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing:  $\pm 3\text{ppm}$  max per year

### Electrical Parameters

- Supply Voltage: 2.8V  $\pm 5\%$
- Standby Current: 1 $\mu$ A max

### Operating Temperature Ranges

- 10 to 70°C
- 40 to 85°C

### Output Details

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

### Output Control

- Standby Operation:  
Logic '1' (>70% VS) to pad 1 enables oscillator output  
Logic '0' (<30% VS) to pad 1 disables oscillator output; when the oscillator output goes to the high impedance state  
No connection to pad 1 enables oscillator output

### Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock: MIL-STD-202F, Method 213B: 1000G, 0.5ms, 1/2 sine wave
- Vibration: MIL-STD-202F, Method 204D, Test Condition D: 20G (10Hz-2000Hz), 4hrs in 3 mutually perpendicular planes (total 12hrs)

### Ordering Information

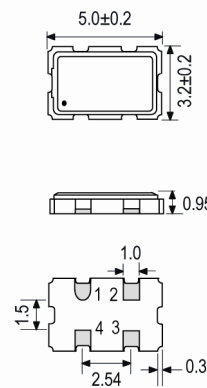
- Frequency\*
- Model\*
- Output
- Frequency Stability\*
- Operating Temperature Range\*
- Supply Voltage (\*minimum required)
- Example  
20.0MHz CFPS-68  
CMOS  $\pm 50\text{ppm}$  -10 to 70C 2.8V

### Compliance

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



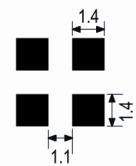
### Outline (mm)



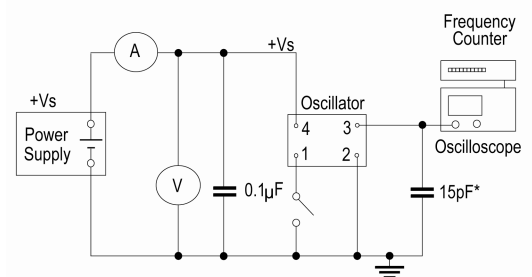
### Pad Connections

- Standby Operation
- GND
- Output
- +VS

### Solder Pad Layout



### Test Circuit



\*Inclusive of jigging and equipment capacitance

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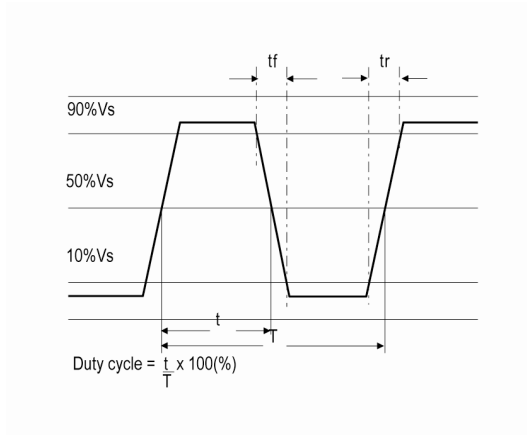
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**Packaging Details**

- Pack Style: Bulk      Loose in bulk pack  
   Pack Size: 100
- 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

**Wave Form**



**Electrical Specification - maximum limiting values 2.8V ±5%**

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
1.8MHz	31.999999MHz	-10 to 70	±25.0	4	12	45/55%
		-40 to 85	±50.0	4	12	45/55%
32.0MHz	50.0MHz	-10 to 70	±25.0	5	12	45/55%
		-40 to 85	±50.0	5	12	45/55%

*This document was correct at the time of printing; please contact your local sales office for the latest version.*

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