



2.5 mm x 3.2 mm Ceramic Package SMD Oscillator, HC-MOS



ISM34 Series

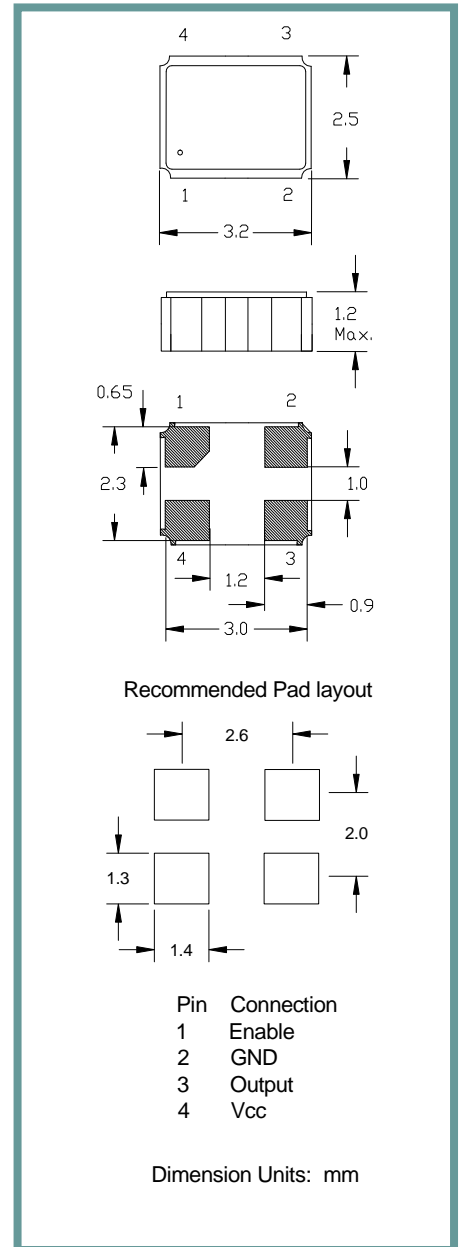
**Product Features:**

- RoHs Compliant
- CMOS Logic Levels
- Compatible with Leadfree Processing
- Small Footprint Package

**Applications:**

- Real Time Clocks
- Metering
- Industrial Control
- Time Reference
- System Clock

<b>Frequency</b>	32.768 kHz
<b>Output Level</b> HC-MOS	'0' = 0.1 Vcc Max., '1' = 0.9 Vcc Min.
<b>Duty Cycle</b>	Specify 50% ±10% or ±5% See Table in Part Number Guide
<b>Rise / Fall Time</b>	50 nS Max.
<b>Output Load</b>	15pF ±5%
<b>Frequency Stability</b>	See Frequency Stability Table (Includes room temperature tolerance and stability over operating temperature)
<b>Enable / Disable Time</b>	200 nS Max.
<b>Start Up Time</b>	28 mS Max.
<b>Supply Voltage</b>	See Input Voltage Table, tolerance ±5 %
<b>Current</b>	1.0 mA Max.
<b>Operating</b>	See Operating Temperature Table in Part Number Guide
<b>Storage</b>	-40° C to +90° C



Part Number Guide			Sample Part Number: ISM34 -3153BH – 32.768				
Package	Input Voltage	Operating Temperature	Symmetry (Duty Cycle)	Output	Stability (in ppm)	Enable / Disable	Frequency
ISM34 -	3 = 3.3 V	1 = 0° C to +70° C	5 = 45 / 55 Max.	3 = 15 pF HC-MOS	A = ±25 B = ±50 C = ±100	H = Enable	- 32.768 kHz
	6 = 2.5 V	6 = -10° C to +70° C	6 = 40 / 60 Max.				
	1 = 1.8 V*	3 = -20° C to +70° C					
		4 = -30° C to +75° C					
		2 = -40° C to +85° C					

NOTE: A 0.01 µF bypass capacitor is recommended between Vcc (pin 4) and GND (pin 2) to minimize power supply noise.



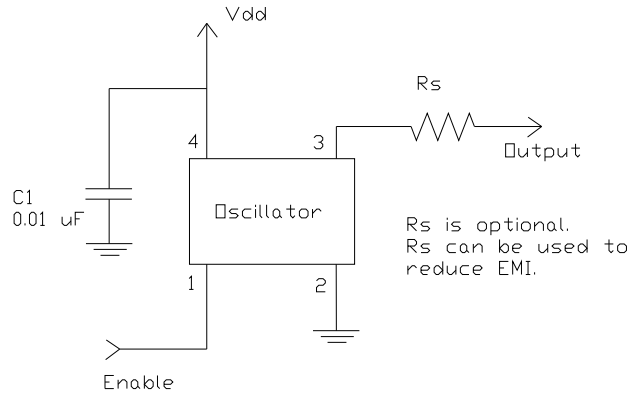
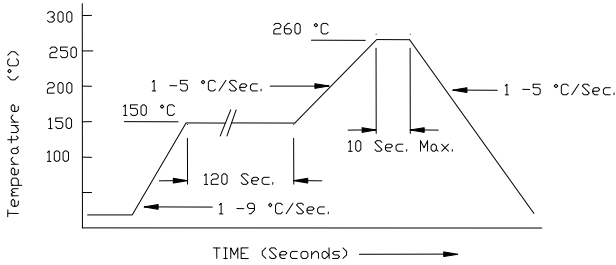
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**Pb Free Solder Reflow Profile:**

**Typical Application:**

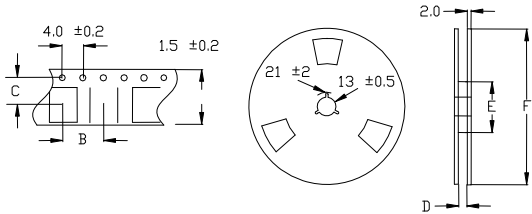


\*Units are backward compatible with 240C reflow processes

**Package Information:**

MSL = N.A. (package does not contain plastic, storage life is unlimited under normal room conditions).  
Termination = e4 (Au over Ni over W base metalization).

**Tape and Reel Information:**



Quantity per Reel	1000
A	16 +/- .3
B	8 +/- .2
C	7.5 +/- .2
D	17.5 +/- .1
E	50 / 60 / 80
F	180 / 250

**Environmental Specifications**

Thermal Shock	MIL-STD-883, Method 1011, Condition A
Moisture Resistance	MIL-STD-883, Method 1004
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Mechanical Vibration	MIL-STD-883, Method 2007, Condition A
Resistance to Soldering Heat	J-STD-020C, Table 5-2 Pb-free devices (except 2 cycles max)
Hazardous Substance	Pb-Free / RoHS / Green Compliant
Solderability	JESD22-B102-D Method 2 (Preconditioning E)
Terminal Strength	MIL-STD-883, Method 2004, Test Condition D
Gross Leak	MIL-STD-883, Method 1014, Condition C
Fine Leak	MIL-STD-883, Method 1014, Condition A2, R1=2x10 <sup>-8</sup> atm cc/s
Solvent Resistance	MIL-STD-202, Method 215

**Marking**

Line 1: ILSI, Date Code (YWW)  
Line 2: Frequency