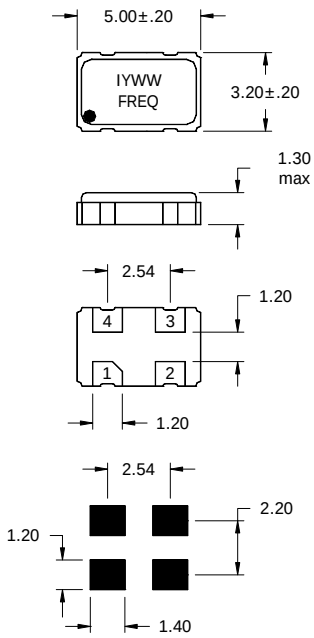
3.2 mm x 5.0 mm Ceramic Package SMD Oscillator

ISM82 Series

Product Features:
- Wide Temperature Range (-55º to +125ºC)
- Frequency Stability option ±50 ppm over the full operating temperature range.
- Low Phase Noise
- RoHS Compliant

Frequency	1.000 MHz to 125.000 MHz
Output Level CMOS	Logic '0' = 10% of Vcc max Logic '1' = 90% of Vcc min
Duty Cycle	Specify 50% ±10% or ±5% See Table in Part Number Guide
Rise / Fall Time	5 nS Max. for 10% to 90% of waveform
Output Load	15 pF
Frequency Stability	See Frequency Stability Table (Includes room temperature tolerance and stability over operating temperature)
Aging (Initial First Year)	±3 ppm max
Start-up Time	5 mS Max.
Supply Voltage	See Input Voltage Table, tolerance ±5 %
Current	50 mA Max.
Operating	-55° C to +125° C
Storage	-55° C to +125° C
Phase Jitter: **(12kHz – 20MHz)**	1 pS RMS max
Tri-State (Pin 1) Function Enable / Disable Time Current, Standby Mode	 Standby 100 nS Max. N.C. or ≥ 70% Vcc = Enable. ≤ 30% Vcc = Disable 20 µA



Recommended
Land Pattern

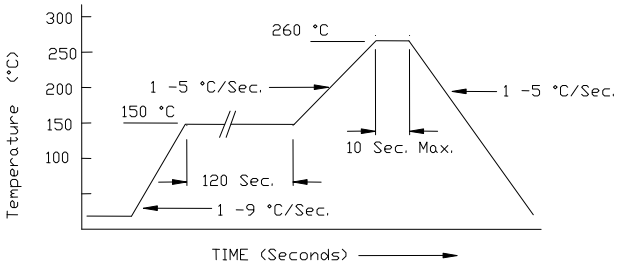
Pin Connection	
Pin 1	Enable / Disable or NC
Pin 2	Ground
Pin 3	Output
Pin 4	Vcc

Part Number Guide			**Sample Part Number:**		**ISM82-3756BH-20.000**		
Package	Input Voltage	Operating Temperature	Symmetry (Duty Cycle)	Output	Stability (in ppm)	Enable / Disable	Frequency
ISM82	1 = 1 .8 V	**7** = -55ºc to +125ºc	5 = 45 / 55 max	3 = 15pF	B = ±50 ppm	H = Enable	20.000
	2 = 2.7 V		6 = 40 / 60 max	6 = 30pF *	C= ±100 ppm	O = N/C	
	3 = 3.3 V						
	6 = 2.5 V						
	7 = 3.0 V						

***Oscillator may not meet 5% symmetry over temperature range with 30 pF load.**

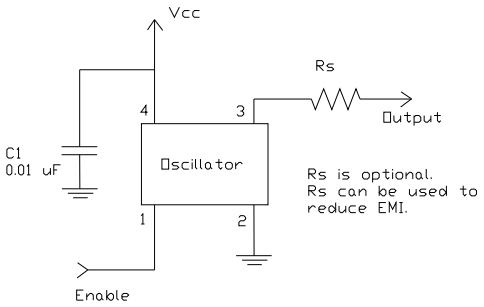
NOTE: A 0.01 µF bypass capacitor is recommended between Vcc (pin 4) and GND (pin 2) to minimize power supply noise.

Pb Free Solder Reflow Profile:



*Units are backward compatible with 240° C reflow processes

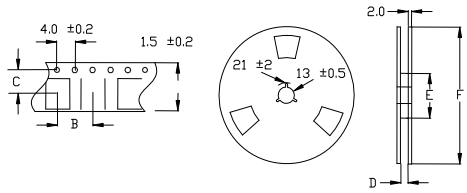
Typical Application:



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 metallization).

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=2x10-8 atm cc/s
Solvent Resistance	MIL-STD-202, Method 215

Marking:

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