1.6 mm x 2.0 mm SMD Oscillator

ISM20 Series

Product Feature:

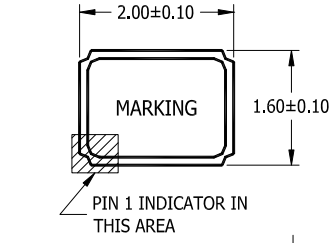
- Ultra-miniature Package
- Tristate function available
- RoHS Compliant
- Compatible with Leadfree Processing

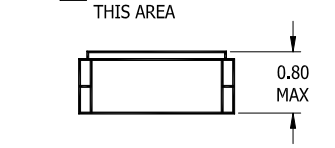
Applications:

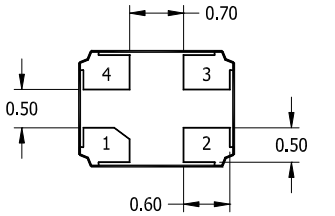
- Fibre Channel
- Server & Storage
- Sonet / SDH
- 802.11 / WiFi
- T1/E1, T3/E3

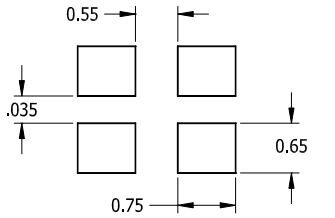
Frequency	1.000 MHz to 80.000 MHz
Frequency Stability (Note 1)	See Part Number Guide
Supply Voltage ±5% (Vcc)	See Part Number Guide
Supply Current	4.0 mA
Output Levels **Logic "0"** **Logic "1"**	CMOS Less than 10% of Supply Voltage Greater than 90% of Supply Voltage
Symmetry (50% of waveform)	See Part Number Guide
Rise / Fall Time (20% to 80%)	6 nSec max
Output Load	See Part Number Guide
Load	15pF
Start Up Time	10 mSec max
Temperature Range **Operating Temperature** **Storage**	 See Part Number Guide -55°C to + 125°C
Tri-state Function (H)	Voh = 70% of Vdd min or No Connection to Enable Output Vol = 30% of Vdd max or grounded to Disable Output (High Impedance)

Notes
1. Inclusive of Temperature Range, Load, Voltage and Aging.
2. A 0.01 uF bypass capacitor is recommend between VCC (Pin 4) and GND (Pin 2) to minimize power supply noise.









SUGGESTED LAND PATTERN

PIN CONNECTIONS	
PIN 1	TRI-STATE OR NO CONNECTION
PIN 2	GROUND
PIN 3	OUTPUT
PIN 4	SUPPLY VOLTAGE

DIMENSIONS IN mm

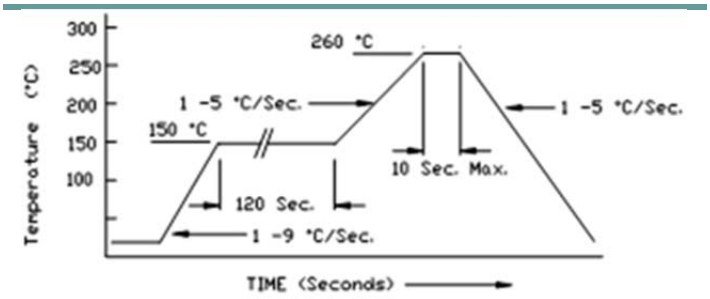
Part Number Guide — Sample Part Number: ISM20-363BH-20.0000M

Package	Input Voltage	Operating Temperature	Symmetry (Duty Cycle)	Output	Stability (in ppm)	Pin 1 Select	Frequency
ISM20	1 = +1.80	1 = 0°C to +70°C	5 = 45/55	3 = 15 pF	F = ±20	H = Enable	20.0000MHz
	6 = +2.50	3 = -20°C to +70°C	6 = 40/60		A = ±25	0 = N/C	
	3 = +3.30	2 = -40°C to +85°C			B = ±50		
					C = ±100		

Package Information:

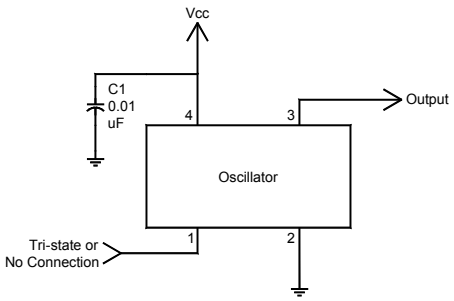
MSL = 1 (package does not contain plastic; storage life is unlimited under normal room conditions.
Termination = e4 (Au over Ni over W base metallization.)

Pb Free Solder Reflow Profile:

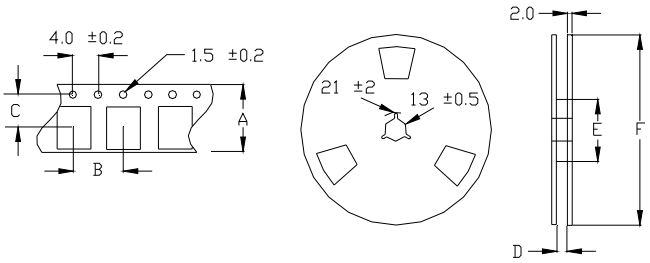


Units are backward compatible with 240C reflow processes

Typical Circuit:



Tape and Reel Information:



Quantity per Reel	3000
A	8.0 ±0.3
B	4.0 ±0.2
C	3.5 ±0.2
D	9.0 ±0.1 or 12.0 ±0.3
E	60 / 80
F	180

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, Date Code (YWW)
Line 2: Frequency