



3.2 mm x 5.0 mm Ceramic Package SMD Oscillator, LVDS



ISM89 Series

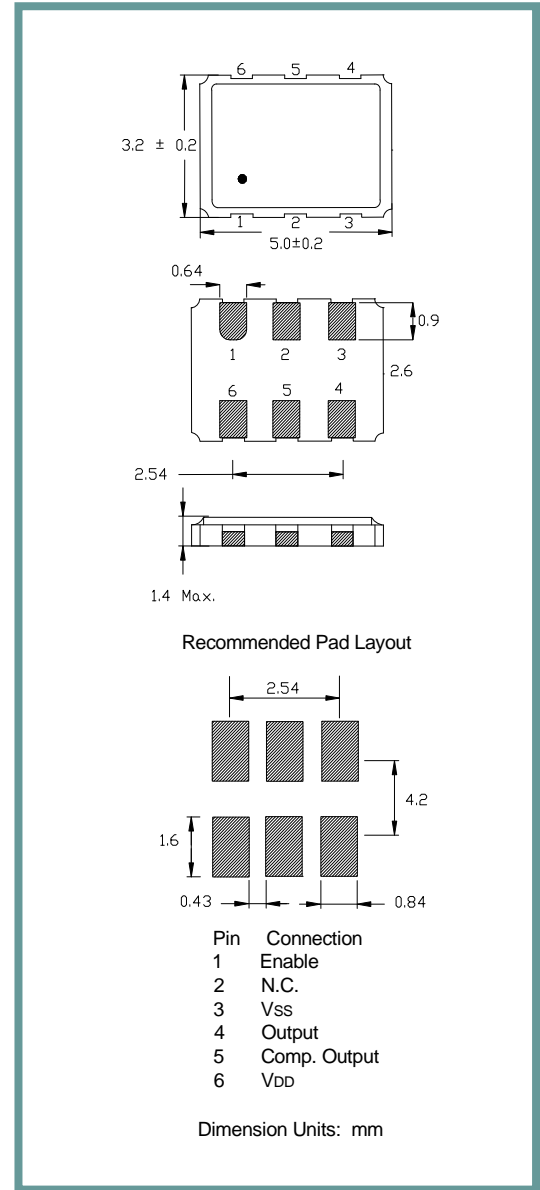
**Product Features:**

- Surface Mount Package
- Low Jitter
- Reflow Compatible
- Compatible with Leadfree Processing

**Applications:**

- Test Equipment
- Server & Storage
- Sonet /SDH

<b>Frequency</b>	80 MHz to 250.000 MHz
<b>Output Level</b>	$V_{OH} = 1.43$ typ. $V_{OL} = 1.10$ typ.
<b>Duty Cycle</b>	50% $\pm$ 5%
<b>Rise / Fall Time</b>	0.7 nS Max.
<b>Output Load</b>	100 $\Omega$ (offset 1.25V typ.)
<b>Frequency Stability</b>	$\pm$ 25ppm
<b>Enable Phase Delay</b>	2 mS Max.
<b>Disable Phase Delay</b>	200 nS Max.
<b>Supply Voltage</b>	See Input Voltage Table, Tolerance $\pm$ 5 %
<b>Current</b>	55 mA Typical
<b>Operating</b>	-40° C to +85° C
<b>Storage</b>	-50° C to +125° C
<b>Integrated Jitter RMS</b>	0.3 typ. (12 KHz to 20 MHz Band)



Part Number Guide		Sample Part Number: ISM89 – 3258AH - 156.250					
Package	Input Voltage	Operating Temperature	Symmetry (Duty Cycle)	Output	Stability (in ppm)	Enable / Disable	Frequency
ISM89 -	3 = 3.3 V	1 = 0° C to +70° C	5 = 45 / 55 Max.	8 = LVDS	A = $\pm$ 25	H = Enable	- 156.250 MHz
	6 = 2.5 V	6 = -10° C to +70° C					
		3 = -20° C to +70° C					
		2 = -40° C to +85° C					

NOTE: A 0.01  $\mu$ F bypass capacitor is recommended between Vcc (pin 6) and GND (pin 3) to minimize power supply noise.

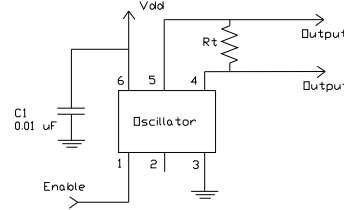
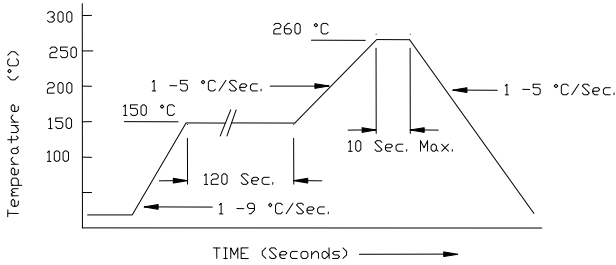


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**Pb Free Solder Reflow Profile:**

**Typical Application:**



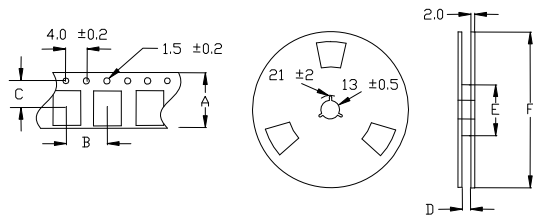
LVDS Load =  $R_t$  - 100 ohms

\*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 and Date Code (YWW)  
Line 2: Frequency