

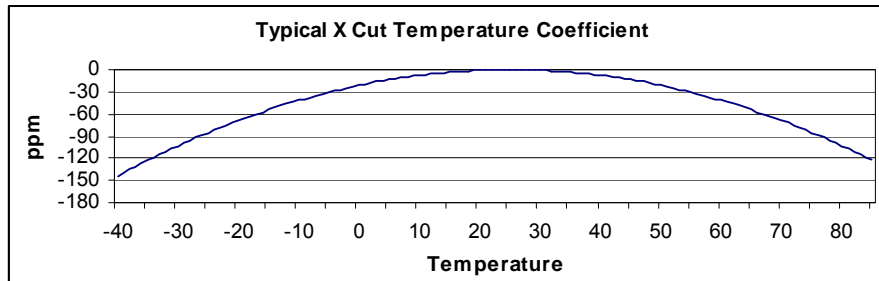
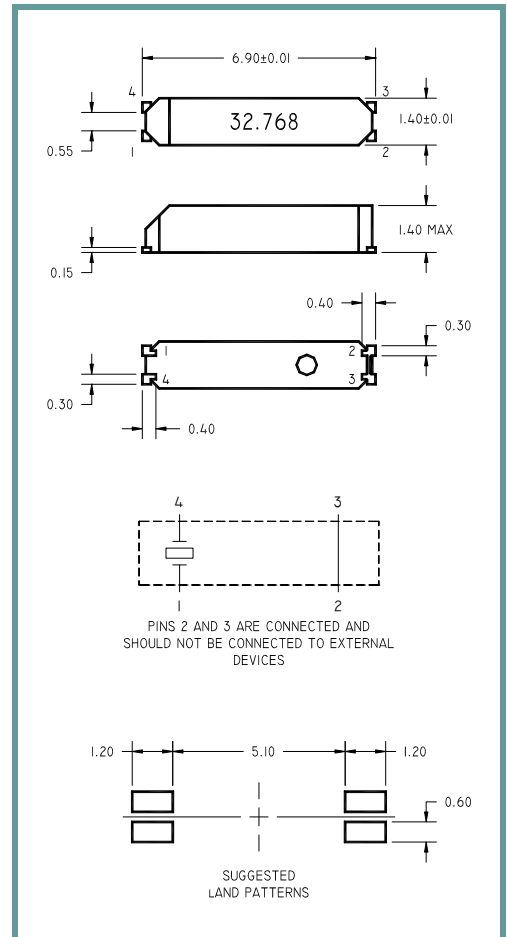
## Product Features:

Low Cost SMD Package  
Low ESR  
Compatible with Leadfree Processing

## Applications:

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

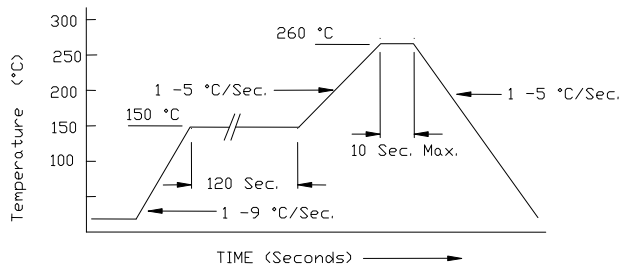
Frequency	32.768 kHz
ESR (Equivalent Series Resistance)	65 k $\Omega$ Max.
Shunt Capacitance (C0)	1.8 pF Typical
Frequency Tolerance @ 25° C	$\pm 20$ ppm Standard
Frequency Stability over Temperature	Parabolic -0.034 ppm / ° C <sup>2</sup> Typ. Turnover +25°C $\pm 5^\circ$ C. See graph below.
Crystal Cut	X Cut
Load Capacitance	6.0 pF, 9.0 pF or 12.5 pF
Drive Level	1 uW Max.
Aging	$\pm 5$ ppm Max. / Year
Operating	-40° C to +85° C
Storage	-40° C to +85° C



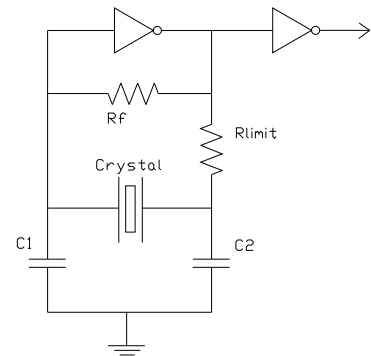
Part Number Guide		Sample Part Number: IL3R - HX5F12.5 - 32.768 KHz				
Package	Tolerance (ppm) at Room Temperature	Stability (ppm) over Operating Temperature	Operating Temperature Range	Mode	Load Capacitance (pF)	Frequency
IL3R -	H = $\pm 20$ ppm	X = X Cut	5 = -40°C to +85°C	F = Fundamental	12.5 pF (Standard). 9 pF 6 pF	- 32.768 kHz

### Pb Free Solder Reflow Profile:

### Typical Circuit:



\*Units are backward compatible with 240C reflow processes

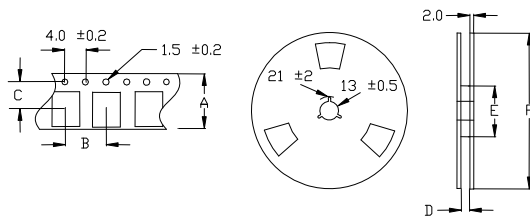


### Package Information:

MSL = 1

Termination = e1 (Sn/Cu/Ag over Ni over Kovar base metal)

### Tape and Reel Information:



Quantity per Reel	3000
A	16 +/- .3
B	4.0 +/- .2
C	7.5 +/- .2
D	17.5 +/- 1.5
E	60
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 <sup>-8</sup> atm cc/s
Solvent Resistance	MIL-STD-202, Method 215

### Marking

Line 1: 32.768

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