4 Pad Plastic Package Quartz Crystal, 4.6 mm x 12.5 mm

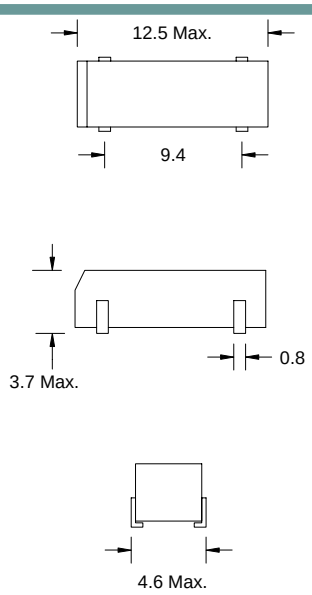
IL3S Series

Product Features:

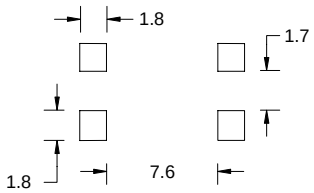
Low Cost SMD Package
RoHs Compliant
Compatible with Leadfree Processing

Applications:

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



Connection Diagram



Dimension Units: mm

Frequency	3.5 MHz to 35 MHz
ESR (Equivalent Series Resistance) 3.5 MHz – 3.99 MHz 4.0 MHz – 5.99 MHz 6.0 MHz – 9.99 MHz 10.0 MHz – 35 MHz	 200 Ω Max. 150 Ω Max. 100 Ω Max. 50 Ω Max.
Shunt Capacitance (C0)	7 pF Max.
Frequency Tolerance @ 25° C	±30 ppm Standard (see Part Number Guide for more options)
Frequency Stability over Temperature	±50 ppm Standard (see Part Number Guide for more options)
Crystal Cut	AT Cut
Load Capacitance	18 pF Standard (see Part Number Guide for more options)
Drive Level	1 mW Max.
Aging	±5 ppm Max. / Year Standard
Temperature	
Operating	0° C to +70° C Standard (see Part Number Guide for more options)
Storage	-40° C to +85° C Standard

Part Number Guide **Sample Part Number: IL3S - FB1F18 - 20.000**

Package	Stability (ppm) at Room Temperature	Stability (ppm) over Operating Temperature	Operating Temperature Range	Mode (overtone)	Load Capacitance (pF)	Frequency
IL3S -	B = ±50 ppm	B = ±50 ppm	0 = 0°C to +50°C	F = Fundamental	18 pF Standard. Or Specify	- 20.000 MHz
	F = ±30 ppm	F = ±30 ppm	1 = 0°C to +70°C			
	G = ±25 ppm	G = ±25 ppm	2 = -10°C to +60°C			
	H = ±20 ppm	H = ±20 ppm	3 = -20°C to +70°C			
	I = ±15 ppm	I = ±15 ppm**	5 = -40°C to +85°C			
	J = ±10 ppm*	J = ±10 ppm**	9 = -10°C to +50°C			

* Not available at all frequencies. ** Not available for all temperature ranges.

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Specifications subject to change without notice

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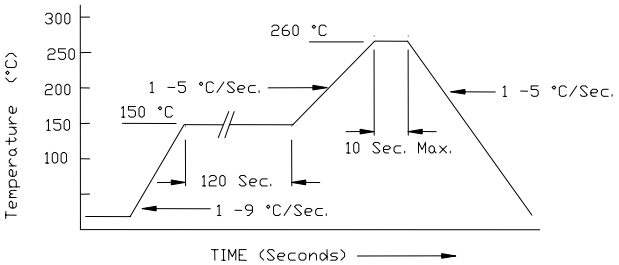
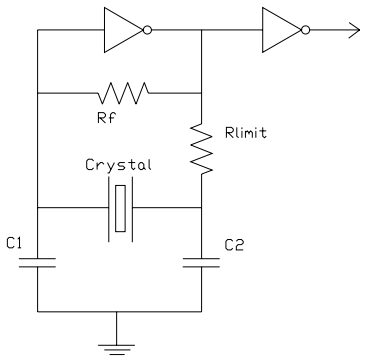
Pb Free Solder Reflow Profile:



*Units are backward compatible with 240C reflow processes

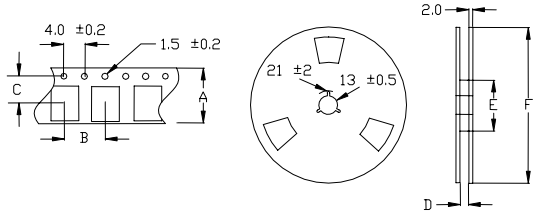
Typical Circuit:



Package Information:

MSL = 2a
Termination = e1 (Sn/Cu/Ag over Ni over Kovar base metal)

Tape and Reel Information:



Quantity per Reel	1000
A	24 +/-.3
B	12 +/-.2
C	11.5 +/-.2
D	25 +/-1.5
E	80 / 100
F	330

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: I- Frequency