H Series Crystal

- **3.5mm x 6 mm x1.2mm Ceramic Package**
- **Tight Tolerance and Stability**
- **Wide Frequency Range**
- **Tape and Reel Packaging Available**



Frequency Range	8.000MHZ to 100.000MHZ
Frequency Tolerance / Stability	(See Part Number Guide for Options)
Operating Temperature Range	(See Part Number Guide for Options)
Storage Temperature	-40°C to +85°C
Aging	±5ppm per year max
Shunt Capacitance	7pF max
Load Capacitance	20pF Standard (See Part Number Guide for Options)
Equivalent Series Resistance	See ESR Chart
Mode of Operation	Fundamental <40 MHZ/ 3rd OT 40 >MHZ
Drive Level	100µW max
Insulation Resistance	500 M ohms min at 100VDC ±15VDC

Environmental & Mechanical Detail

Shock	MIL-STD-883, Method 2002 Cond B
Solderability	MIL-STD-883, Method 2003
Solvent Resistance	MIL-STD-202, Method 215
Vibration	MIL-STD-883, Method 2007, Cond A
Gross Leak Test	MIL-STD-883, Method 1014, Cond C
Fine Leak Test	MIL-STD-883, Method 1014, Cond A2
MSL	Level 1 per IPC/JEDEC J-STD 20

Marking Detail

Line 1: MXX.XXX
XX.XXX = Frequency in MHz
Line 2: SYMCCL
S = Internal Code
YM = Numerical Date Code (Year/
CC = Crystal Parameters Code
L = Denotes RoHS Compliant

MMD MONITOR/QUARTZEK – An ILSI Company,
5458 Louie Lane, Reno, NV 89511
Phone: (775) 851-8880, www.mmdcomp.com

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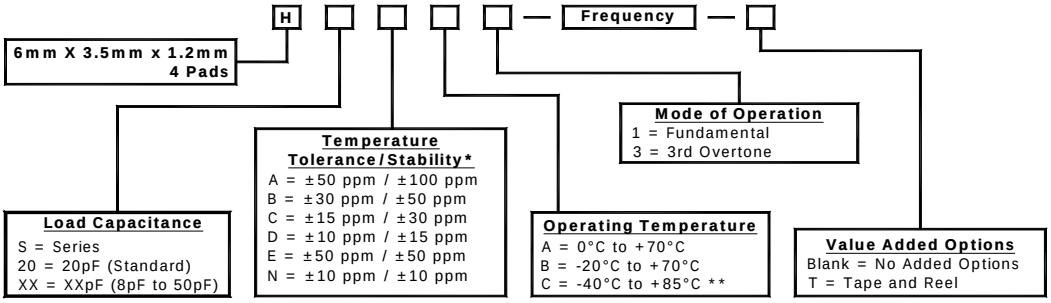
Specifications are subject to change without notice.

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ESR Chart

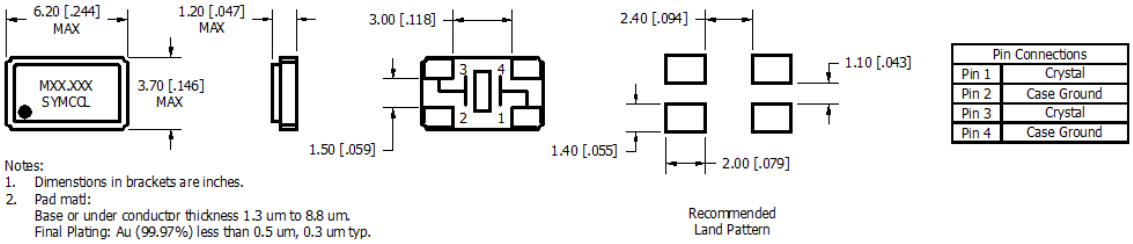
Frequency Range	ESR (Ohms)	Mode / Cut
8.000MHZ to 10.999MHZ	100 max	Fund / AT
11.000MHZ to 11.999MHZ	80 max	Fund / AT
12.000MHZ to 15.999MHZ	60 max	Fund / AT
16.000MHZ to 39.999MHZ	40 max	Fund / AT
40.000MHZ to100.000MHZ	70 max	3rd OT/ AT

Part Number Guide



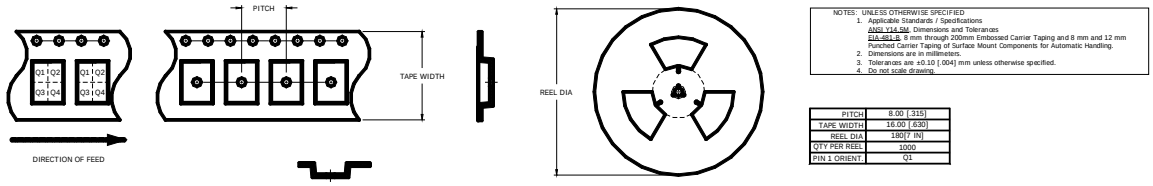
* Please consult with MMD sales department for any other parameters or options.
** Not all Frequency Tolerance/Stability options available at this temperature range.

Mechanical Details



Notes:
1. Dimenstions in brackets are inches.
2. Pad matl:
   Base or under conductor thickness 1.3 um to 8.8 um.
   Final Plating: Au (99.97%) less than 0.5 um, 0.3 um typ.

Tape & Reel



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