

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 Maximum
Shunt Capacitance	7pF Maximum
Load Capacitance	(See Part Number Guide for Options)
Equivalent Series Resistance	See ESR Chart
Mode of Operation	Fundamental <40 MHz / 3 rd Overtone ≥40MHz
Drive Level	100µW Maximum
Insulation Resistance	500 Megaohms Minimum at 100Vdc

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 or SSYMCCCL
S or SS = Internal Code
YM = Numerical Date Code
CC = Crystal Parameters Code
L = Denotes RoHS Compliant

**QUALITY SYSTEM
CERTIFIED
= ISO 9001 =**

MMD MONITOR/QUARTZEK – An ILSI Company
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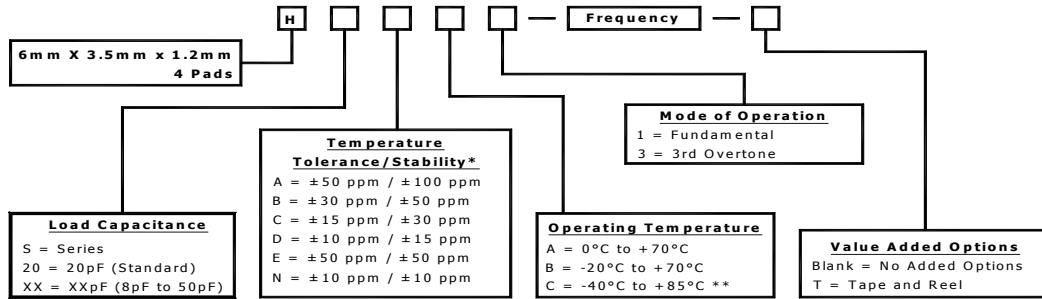


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ESR Chart

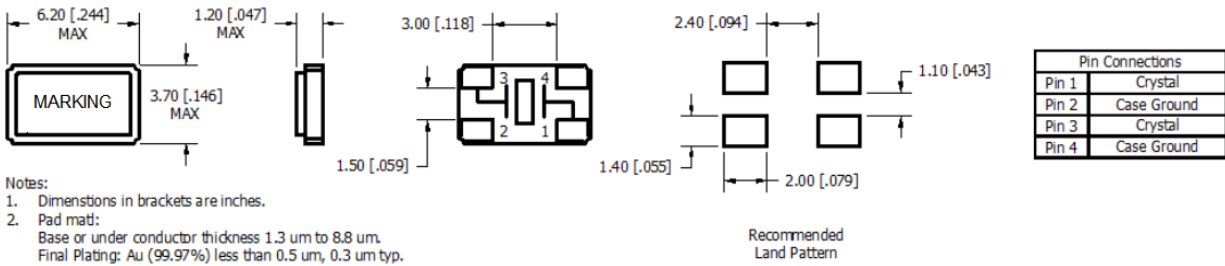
Frequency Range	ESR (Ohms)	Mode / Cut
8.000MHZ to 10.999MHZ	100 max	Fund / AT
11.000MHZ to 11.999MHZ	80 max	Fund / AT
12.000MHZ to 15.999MHZ	60 max	Fund / AT
16.000MHZ to 39.999MHZ	40 max	Fund / AT
40.000MHZ to 100.000MHZ	70 max	3 rd OT/ AT

Part Number Guide



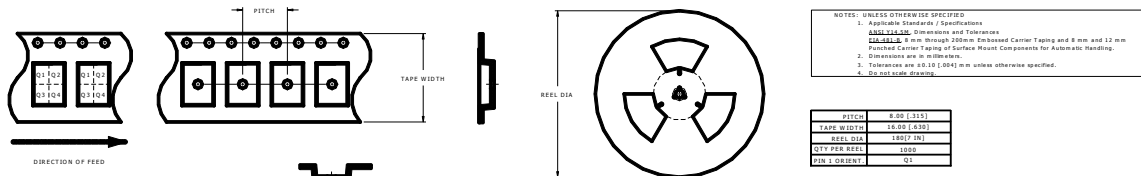
* Please consult with MMD sales department for any other parameters or options.
 ** Not all Frequency Tolerance/Stability options available at this temperature range.

Mechanical Details



Notes:
 1. Dimensions in brackets are inches.
 2. Pad mat:
 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



NOTES: UNLESS OTHERWISE SPECIFIED
 1. Applicable Standards / Specifications
 2. Dimensions are in millimeters
 3. Tolerances are ±0.10 (.004) in. unless otherwise specified.
 4. See drawing 020000

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