- **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	(See Part Number Guide for Options)
Equivalent Series Resistance	See ESR Chart
Mode of Operation	Fundamental <50 MHz 3rd Overtone ≥ 40 MHz
Drive Level	100µW Max
Insulation Resistance	500 Megaohms Minimum at 100 Vdc

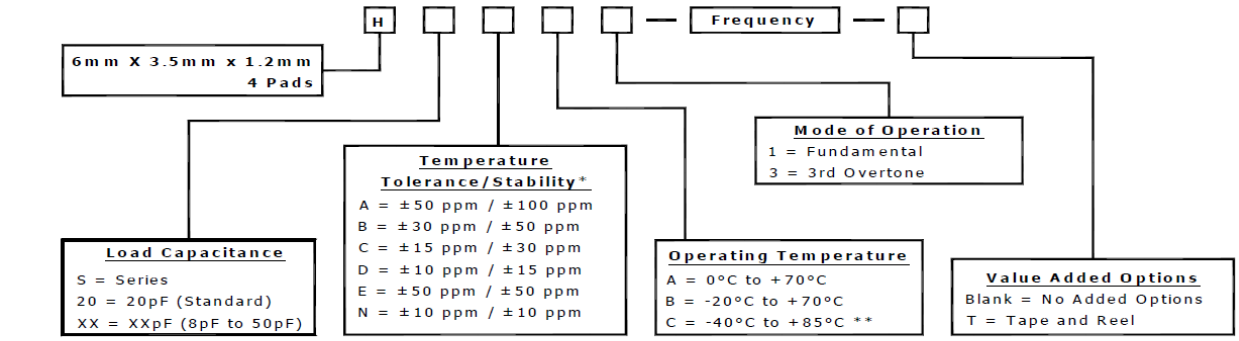
Environmental & Mechanical Detail

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

ESR Chart

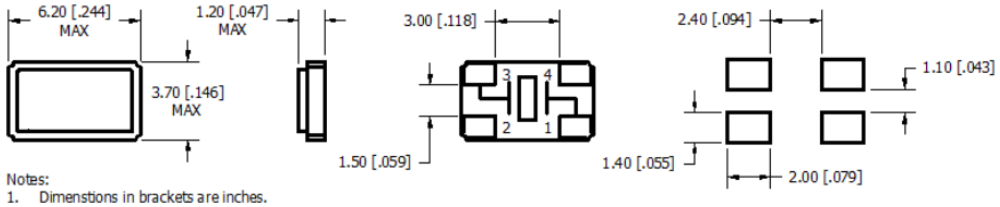
Frequency Range	ESR (Ohms)	Mode/ Cut
8.000MHz to 10.999MHz	100 Max	Fund / AT
11.000MHz to 11.999MHz	80 Max	Fund / AT
12.000MHz to 15.999MHz	60 Max	Fund / AT
16.000MHz to 50.000MHz	40 Max	Fund / AT
40.000MHz to 100.000MHz	80 Max	3rdOT /AT

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

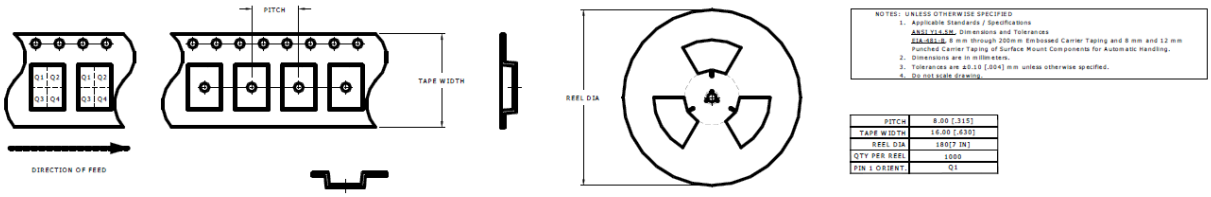


Pin Connections	
Pin 1	Crystal
Pin 2	Case Ground
Pin 3	Crystal
Pin 4	Case Ground

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.

Recommended
Land Pattern

Tape and Reel



NOTES: UNLESS OTHERWISE SPECIFIED
1. Applicable Standards / Specifications
   ANSI Y14.5M Dimensions and Tolerances
   EIA-481-B 8 mm through 200mm Embossed Carrier Taping and 8 mm and 12 mm Punched Carrier Taping of Surface Mount Components for Automatic Handling.
2. Dimensions are in millimeters.
3. Tolerances are ±0.10 [.004] mm unless otherwise specified.
4. Do not scale drawing.

PITCH	8.00 [.315]
TAPE WIDTH	16.00 [.630]
REEL DIA	180[7 IN]
QTY PER REEL	1000
PIN 1 ORIENT.	Q1