X Series Crystal



- O 2mm X 2.5mm 4 Pads Ceramic Package
- O Ultra-miniature Profile
- O RoHS Compliant
- O Tape and Reel Packaging



Frequency Range	16.000MHZ to 60.000MHZ	
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	±2ppm / per year	
Shunt Capacitance	3pF Max	
Load Capacitance	10pF Standard (See Part Number Guide for Options)	
	See ESR Chart	
Equivalent Series Resistance	See ESR Chart	
Equivalent Series Resistance Drive Level	See ESR Chart 100µW Max	

Environmental & Mechanical Detail

Marking 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 A
MSL	Level 1 per IPC/JEDEC J-STD 20

First Line = MXX.X (not to exceed 5 characters)		
М	=	MMD
xx.x	=	Device Frequency (four digits including decimal point)
Second Line = SYWW (not to exceed 5 characters)		
S	=	Internal Code
YM	=	Date Code (Year/Month)



MMD MONITOR/QUARTZEK – An ILSI Company,

5458 Louie Lane, Reno, NV 89511 Phone: (775) 851-8880, <u>www.mmdcomp.com</u>



ESR Chart

Frequency Range	ESR (Ohms)	Mode / Cut
16.000MHZ to 19.999MHZ	120 Max	Fund / AT
20.000MHZ to 29.999MHZ	80 Max	Fund / AT
30.000MHZ to 60.000MHZ	50 Max	Fund / AT

Part Number Guide







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Revision:
