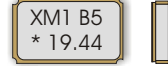


CRYSTAL

5.0 X 7.5mm CERAMIC SURFACE MOUNT CRYSTAL



XM-1-Series
XM-1T-Series

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-40	-	85	°C	

ELECTRICAL SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	8	-	100	MHz	
Frequency Calibration @ 25°C		±10	-	±100	ppm	1
Frequency Tolerance:		±10	-	±100	ppm	2
Operating Temperature Range		-40	-	85	°C	3
Mode			Fundamental or 3 rd Overtone			
Shunt Capacitance	(Co)	-	-	7.0	pF	
Equivalent Series Resistance		-	See Table 3	-	Ohm	
Load Capacitance	(CL)	-	See Table 3	-	pF	4
Drive Level		-	-	100	u Watts	
Package Height "H"						
	XM-1	-	-	0.051" (1.3mm)		
	XM-1T	-	-	0.043" (1.1mm)		

TABLE 3.0

Frequency Range	Mode of Operation	E.S.R	CL (Note 4)
8 MHz to 9.999 MHz	Fundamental	60 Ohms Max.	16 pF
10 MHz to 15.999 MHz	Fundamental	50 Ohms Max.	16 pF
16MHz to 32 MHz	Fundamental	40 Ohms Max.	16 pF
28 MHz to 83.999 MHz	3 rd Overtone	60 Ohms Max.	Series
84 MHz to 100 MHz	5th Overtone	80 Ohms Max.	Series

ENVIRONMENTAL CHARACTERISTICS

TABLE 4.0

Package	Hermetically Sealed Ceramic Package.
Aging (First year maximum)	+/-5ppm
Shock Resistance (Maximum)	+/-5ppm Test standard: free drop onto a hard wooden board from a height of 75cm, 3 times.
Vibration Resistance (Maximum)	+/-5ppm Test standard: Frequency from 10 to 500 Hz, amplitude at 1.5mm or 10G which ever is smaller each plane X, Y and Z.
Insulation Resistance (Minimum)	500 M ohm minimum at 100 +/-15 Vdc.
Leakage	0.01ppm atm. cc/sec. maximum

Notes

- Other calibration tolerances are available; please specify calibration in the part number.
- Tolerances less than +/-100ppm frequency stability is referenced to the frequency measured at 25°C. +/-100 ppm tolerance is all inclusive of calibration @ 25°C, frequency vs. temperature stability and aging. ±10ppm, ±20ppm, ±30ppm, ±50ppm, ±100ppm, or specify; please specify tolerance in the part number.
- 10 to 60°C, -10 to 70°C, -20 to 70°C, -40 to 85°C, or specify; please specify the temperature range in the part number.
- Series, 16pF, 20pF, 30pF, 32pF, or specify; please specify the load in the part number.

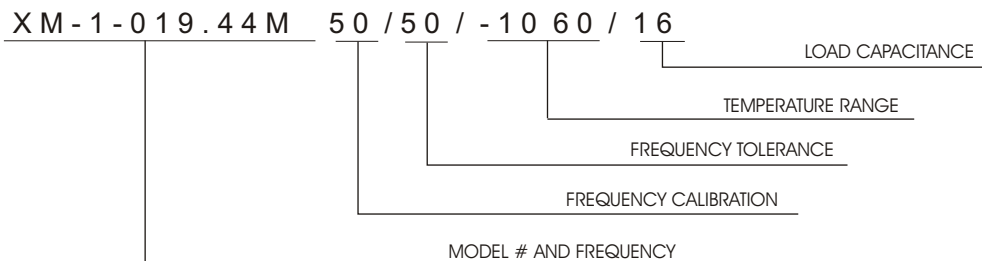
DESCRIPTION

The Connor Winfield XM-1 series and XM-1T series are 5x7.5mm Surface Mount Crystals, designed for applications requiring small packaged tight tolerance crystals. The surface mount package is designed for high-density mounting and is optimum for mass production.

FEATURES

- 5x7.5MM SURFACE MOUNT CRYSTAL
- AVAILABLE FREQUENCY TOLERANCES: ±10PPM TO ±100PPM
- AVAILABLE TEMPERATURE RANGES: -10 TO 60°C, -10 TO 70°C, -20 TO 70°C, -40 TO 85°C
- TAPE AND REEL PACKAGING
- RoHS COMPLIANT / LEAD FREE

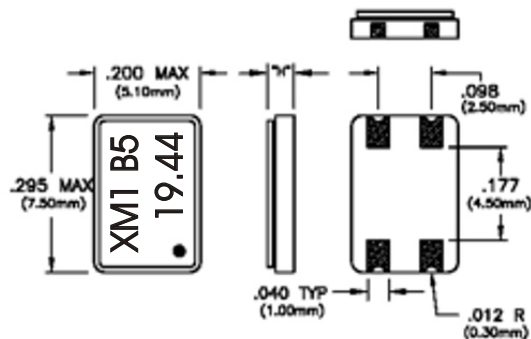
ORDERING INFORMATION



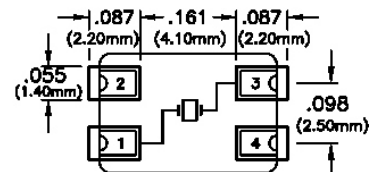
Specifications subject to change without notice.

CRYSTAL

Package Outline



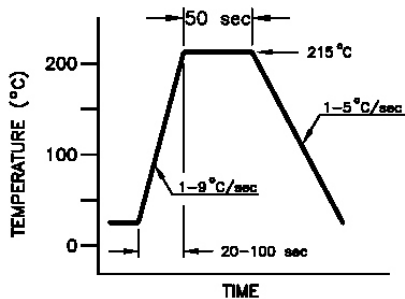
Suggested Pad Layout



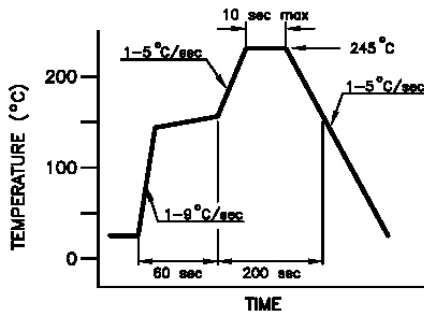
Reflow Profiles

260°C Max x 10 Seconds Max x 2 Times Max
or
230°C Max x 180 Seconds Max x 1 Time

VAPOR PHASE REFLOW



INFRARED RAYS REFLOW



Pin Connections

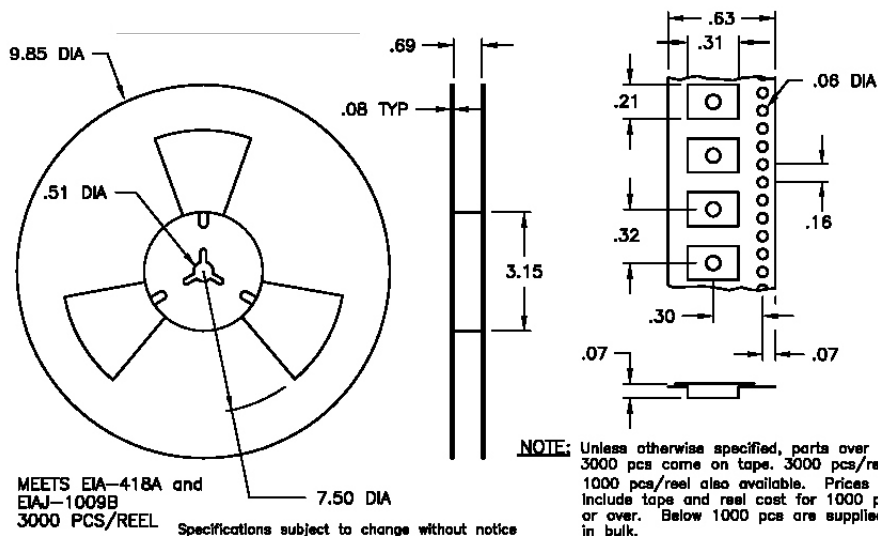
TABLE 5.0

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

Marking:

Xm1 = XM-1
B5 = Date Code
19.44 = 19.44 MHz

Tape and Reel Diagram



Specifications subject to change without notice.