



FEATURES

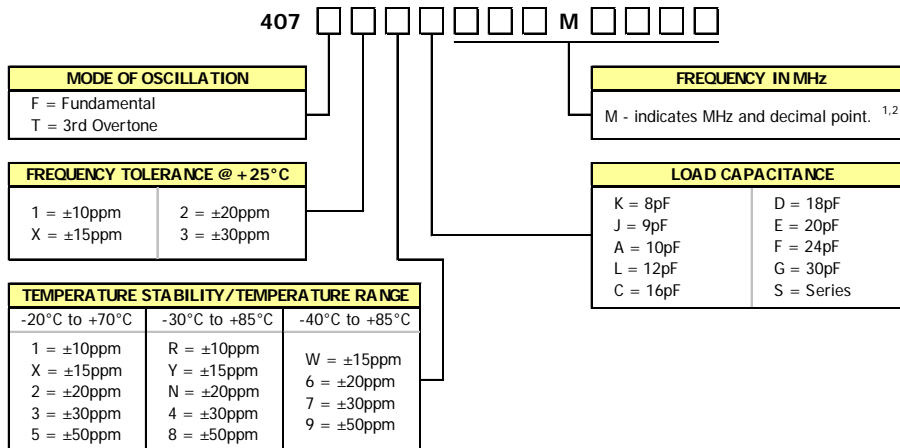
- Standard 7.0mm x 5.0mm Ceramic Surface Mount Package
- Fundamental and 3rd Overtone Crystal Design
- Frequency Range 6 – 133MHz
- Frequency Tolerance, ± 30 ppm Standard
- Frequency Stability, ± 50 ppm Standard
- Operating Temperature to -40°C to $+85^{\circ}\text{C}$
- Stable Frequency Over Temperature and Drive Level
- Tape & Reel Packaging Standard, EIA-481
- **RoHS/Green Compliant [6/6]**



APPLICATIONS

Model 407 is a seam sealed ceramic packaged quartz resonator offering excellent performance for a wide variety of applications including; wireless communications, broadband access, WLAN/WiMax/WIFI, test and measurement, portable equipment and computer peripherals.

ORDERING INFORMATION



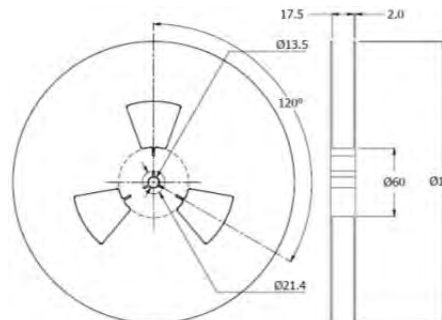
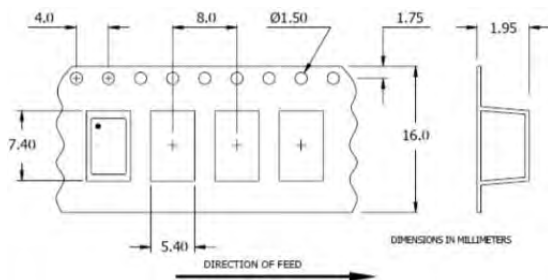
1. Frequency is recorded with 3 leading digits before the 'M' and 4 significant digits after the 'M' [including zeros].
[Ex. XXXMXXXX (016M3840), XXXMXXXX (022M1184)]

2] There are frequencies that have significant digits after the 'M' that exceed the 4 digits. The remaining digits will be truncated from the CTS part number, but the factory will calibrate to the full frequency desired. Ex. PN Frequency = Actual Frequency
13M5537 = 13.553750 MHz 14M3181 = 14.318180 MHz 16M6666 = 16.666670 MHz 28M6363 = 28.636360 MHz

Not all performance combinations and frequencies may be available.
Contact your local CTS Representative or CTS Customer Service for availability.

PACKAGING INFORMATION [reference]

Device quantity is 1k pcs. maximum per 180mm reel.

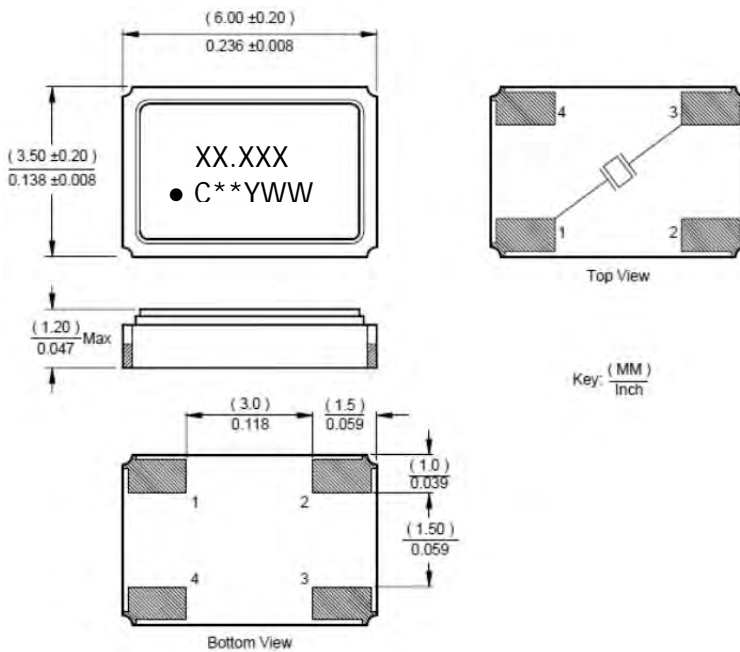


ELECTRICAL CHARACTERISTICS

ELECTRICAL PARAMETERS	PARAMETER	VALUE		
	Frequency Range	6MHz to 40MHz	35MHz to 133MHz	
	Operating Mode	Fundamental	3rd Overtone	
	Crystal Cut	AT-Cut		
	Frequency Tolerance @ +25°C	±30ppm, Standard		
	Frequency Stability Tolerance [Operating Temperature Range, Referenced to +25°C Reading]	±30ppm, Standard		
	Operating Temperature Ranges	-20°C to +70°C		
		-30°C to +85°C	-40°C to +85°C	
	Equivalent Series Resistance - Fundamental Mode [Maximum]	6MHz - <10MHz	80 Ohms	
		10MHz - <14MHz	70 Ohms	
		15MHz - <20MHz	50 Ohms	
		20MHz - 40MHz	40 Ohms	
	Equivalent Series Resistance - 3rd Overtone Mode [Maximum]	35MHz - <44MHz	80 Ohms	
		44MHz - <50MHz	70 Ohms	
		50MHz - <80MHz	60 Ohms	
80MHz - 133MHz		60 Ohms		
Load Capacitance	See Ordering Information			
Shunt Capacitance [C ₀]	5.0pF Typical, 7.0pF Maximum			
Drive Level	10µW Typ., 200µW Max.			
Aging @ +25°C	±3ppm/yr Typical			
Insulation Resistance	500M Ohms @ DC 100V			
Storage Temperature Range	-40°C to +100°C			

MECHANICAL SPECIFICATIONS

PACKAGE DRAWING



MARKING INFORMATION

1. XX.XXX – Frequency marked with 3 significant digits after the decimal.
2. C – CTS identifier.
3. ** – Manufacturing Site code.
4. YWW – Date Code, Y – Last Digit of Year, WW – Week.

NOTES

1. Complete CTS part number, frequency value and date code information must appear on reel and carton labels.
2. Terminations #2, #4 and metal lid are connected internally and may be connected to ground for EMI suppression.
3. Termination pads (e4); barrier plating is nickel [Ni] with gold [Au] flash plate.
4. Reflow conditions per JEDEC J-STD-020; +260°C maximum, 10 seconds.
5. MSL = 1.

SUGGESTED SOLDER PAD GEOMETRY

