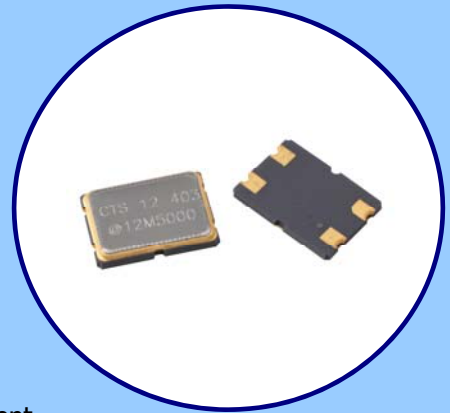




FEATURES

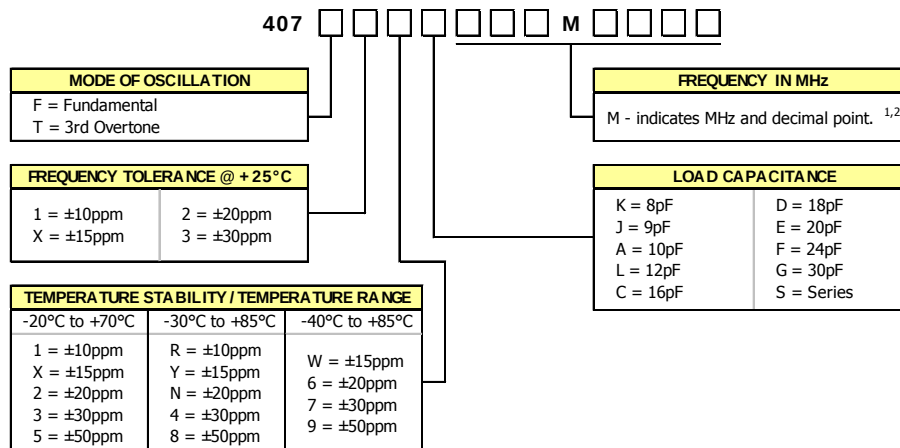
- Standard 7.0mm x 5.0mm Ceramic Surface Mount Package
- Fundamental and 3rd Overtone Crystal Design
- Frequency Range 6 – 133MHz
- Frequency Tolerance, $\pm 30\text{ppm}$ Standard
- Frequency Stability, $\pm 50\text{ppm}$ Standard
- Operating Temperature to -40°C to $+85^{\circ}\text{C}$
- Stable Frequency 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

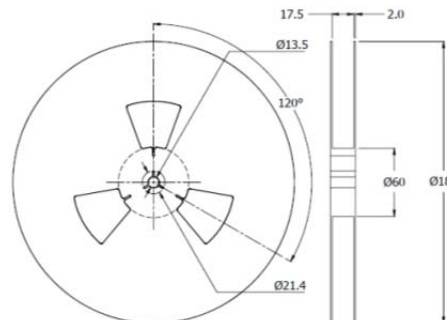
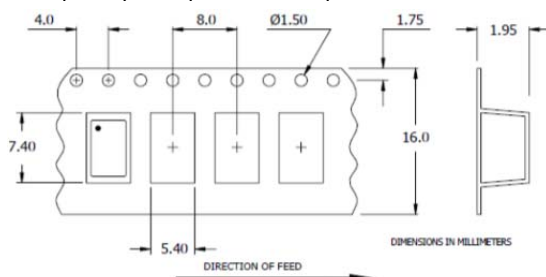


- 1) Frequency is recorded with 3 leading digits before the 'M' and 4 significant digits after the 'M' [including zeros].
[Ex. XXXMXXXX (016M3840), XXMXXXXX (022M1184)]
- 2) There are frequencies that have significant digits after the 'M' that exceed the 4 digits. The remaining digits will be truncated from the CTS part number, but the factory will calibrate to the full frequency listed. Ex. P/N 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.

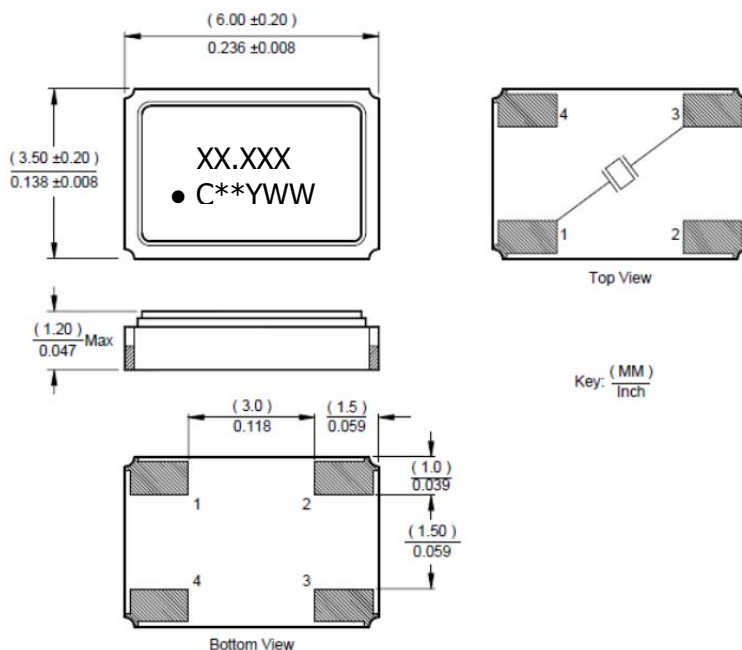


ELECTRICAL CHARACTERISTICS

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

