Q-TECH CORPORATION

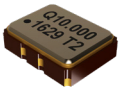
AXTAL a Q-TECH Company

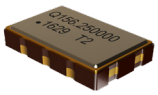
Crystal Oscillators for Military / Defense Applications

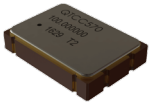
Crystal oscillators designed for use in critical military and defense applications where precise timing, reliability, durability and performance are a must. Oscillators may be screened to MIL-PRF-55310, Level B as required. Q-Tech and AXTAL offer an extensive selection of devices specifically for this application.

Crystal Oscillators (XOs)

Q-Tech's military crystal oscillators off superior cutting edge performance in a low profile, ceramic, surface-mount package. Parts have standard gold plated contact pads with optional solder-dipped terminations.





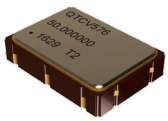


Product Line	QTCC230	QTCC350	QTCC356/58	QTCC353	QTCC570	QTCC576/78
Frequency	32.768kHz, 1.5 - 133MHz	32.768kHz, 1.5 - 133MHz	25 - 250MHz / 100 - 250MHz	25 - 250MHz	1.544 - 190MHz	25 - 250MHz / 100 - 250MHz
Stability	±25 to ±100ppm		±12 to ±100ppm			
Temperature Range	-55°C to 125°C					
Shock (G)	20,000			28,000	20,000	
Crystal Mount	2-point			3-point	2-point	2-point
Screening	MIL-PRF-53310, Level B available					
Supply Voltage (Vdc)	1.8, 2.5, 3.3	1.8, 2.5, 3.3, 5.0	1.8, 2.5, 3.3	1.8, 2.5, 3.3	1.8, 2.5, 3.3, 5.0	1.8, 2.5, 3.3
Output	CMOS	CMOS	LVPECL, LVDS		CMOS	LVPECL, LVDS
Size	2.5 x 3.2 x 1.15 mm	3.2 x 5.0 x 1.2 mm			5.0 x 7.0 x 1.4 mm	5.0 x 7.0 x 1.5 mm

Voltage Controlled Crystal Oscillators (VCXOs)

Our Surface-mount VCXOs provide tight stability using a control voltage to adjust the frequency over a narrow range. These surface-mount devices come in a low-profile ceramic package with gold-plated contact pads.

QTCV356



QTCV576

Product Line	QTCV356	QTCV576
Frequency	1 - 156.250MHz	
APR	±30 to ±100ppm	
Temperature Range	-40°C to 85°C	
Shock (G)	Per MIL-STD-202, Method 213, Cond. I	
Crystal Mount	2-point	
Screening	MIL-PRF-53310, Level B available	
Supply Voltage (Vdc)	3.3, 5.0	
Logic	CMOS, LVPECL	
Size	3.2 x 5 x 1.2 mm	5.0 x 7.0 x 1.5 mm

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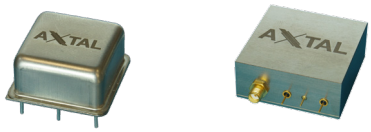
Temperature Compensated Crystal Oscillators (TCXOs)

Q-Tech's TCXOs deliver tighter stability performance by using temperature sensing to maintain the frequency within a narrow range. These surface-mount devices come standard in a low-profile ceramic package with gold-plated contact pads.

Product Line	QTCT220	QTCT230	QTCT236	QTCT350	QTCT570	AXLE5032	AXLE7050
Frequency	10 - 52MHz	10 - 45MHz	10 - 1500MHz	10 - 52MHz	5 - 52MHz	10 - 52MHz	
Stability	±0.5 to ±2.5ppm					±0.5 to ±3.0ppm	
Temperature Range	-40°C to 85°C						
Shock, non-operating	Per MIL-STD-202, Method 213, Cond. I						
Crystal Mount	2-point						
Screening	MIL-PRF-53310, Level B available						
Supply Voltage (Vdc)	2.8, 3.0, 3.3		2.5, 3.3	2.8, 3.0, 3.3, 5.0	2.8, 3.0, 3.3	3.3	
Output	Clipped Sine Wave		CMOS, LVDS, LVPECL	CMOS, Clipped Sine Waved			
Size	2.0 x 2.5 x 0.7 mm	2.5 x 3.2x 0.9 mm	2.5 x 3.2 x 1.6 mm	3.2 x 5.0 x 1.1 mm	5.0 x 7.0 x 1.9 mm	5.0 x 3.2 x 1.7 mm	5.5 x 7.0 x 1.8 mm

Oven Controlled Crystal Oscillators (OCXOs)

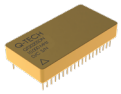
AXTAL OCXOs provide exceptional ppb stability by heating the Crystal at a constant temperature.



Product Line	AX10M70/75(ULN)	AX10M5050(ULN)
Frequency	10 - 160MHz	50 - 160MHz
Stability	±10 to ±50ppb	±100ppb
Temperature Range	40°C to 85°C	
Shock (G)	Per MIL-STD-202, Method 213, Cond. F	
Crystal Mount	4-point	
Screening	IEC60679-1 and MIL-PRF-55310	
Supply Voltage (Vdc)	5.0, 12	12
Output	HCMOS, Sine Wave	
Size	25.8 x 25.8 x 12.7 mm	50 x 50 x 21 mm

Microcomputer-Compensated Crystal Oscillators (MCXOs)

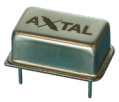
Q-Tech's innovative MCXO can replace bulkier and power-consuming oven-controlled crystal oscillators (OCXOs), while also providing comparable stability over a wide temperature range.



Product Line	QT2010
Frequency	5 - 80Mz
Stability	±5 to ±30ppb
Temperature Range	-40°C to 85°C
Crystal mount	4-point
Screening	MIL-PRF-55310
Supply Voltage (Vdc)	3.3
Output	Sine Wave
Size	1 x 2 x 0.33 in

Surface Acoustic Wave Oscillators (SAWs)

AXTAL SAWs provide very high frequency in robust, small packages that can tolerate high shock and vibration in harsh environments.



Product Line	AXPS10	AXPS20
Frequency (MHz)	500MHz - 1.6GHz	
Stability	±350ppm	
Temperature Range	-40°C to 85°C	
Shock (G)	Per MIL-STD-202, Method 213, Cond. F	
Screening	IEC60679-1 and MIL-PRF-55310	
Supply Voltage (Vdc)	3.3, 5.0	
Output	Sine Wave	
Size	20.3 x 13 x 5.7 mm	20.7 x 13.1 x 5.2 mm