























CRYSTAL MHz Range

RIVER			Case Size	UTECH			
Picture	Type		Frequency Range	Size	Picture	Type	Frequency Range
 <small>AEC Q200</small>	FCX-08 (1.2 x 1.0 x 0.33 mm)		36 ~ 80 MHz	SMD1210			
 <small>AEC Q200</small>	FCX-07 (1.6 x 1.2 x 0.33 mm)	FCX-07L (1.6 x 1.2 x 0.45 mm)	24 ~ 80 MHz	SMD1612		QRSA (1.6 x 1.2 x 0.30 mm)	20 ~ 60 MHz
 <small>AEC Q200</small>	FCX-06 (2.0 x 1.6 x 0.50 mm)		16 ~ 90 MHz	SMD2016		QRS1 (2.0 x 1.6 x 0.50 mm)	16 ~ 96 MHz
 <small>AEC Q200</small>	FCX-05 (2.5 x 2.0 x 0.55 mm)		11 ~ 80 MHz	SMD2520		QRS2 (2.5 x 2.0 x 0.55 mm)	16 ~ 60 MHz
 <small>AEC Q200</small>	FCX-04 (3.2 x 2.5 x 0.90 mm)	FCX-04C (3.2 x 2.5 x 0.70 mm)	8 ~ 60 MHz	SMD3225		QRS3 (3.2 x 2.5 x 0.70 mm)	12 ~ 60 MHz
	FCX-03		8 ~ 60 MHz	SMD5032		QRS5 (5.0 x 3.2 x 0.90 mm)	8 ~ 48 MHz
				SMD7050		QRS7 (1.6 x 1.2 x 0.33 mm)	8 ~ 80 MHz

Note: AEC Q200: -40°C ~ +125°C

CRYSTAL kHz Range

RIVER			Case Size			UTECH			
Picture	Type		Frequency	ESR max.	Size	Picture	Type	Frequency	ESR max.
 <small>AEC Q200</small>	TCX-05X	1.2 x 1.0 x 0.35 mm 0.8 mg	32.768 kHz	80 kΩ	SMD1210				
 <small>AEC Q200</small>	TCX-04	1.6 x 1.0 x 0.50 mm 2,7 mg	32.768 kHz	90 kΩ	SMD1610		QTS1	32.768 kHz	90 kΩ
	FCX-04C Low ESR	1.6 x 1.0 x 0.50 mm 2,7 mg		60 kΩ					
 <small>AEC Q200</small>	TCX-03	2.0 x 1.6 x 0.60 mm 5.0 mg	32.768 kHz	90 kΩ	SMD2012		QTS2	32.768 kHz	70 kΩ
	TCX-03C Low ESR	2.0 x 1.6 x 0.60 mm 5.0 mg		50 kΩ					
	TCX-03L Low Profile	2.0 x 1.6 x 0.35 mm 3.1 mg		60 kΩ					
 <small>AEC Q200</small>	TCX-02S	3.2 x 1.5 x 0.35 mm 10.6 mg	32.768 kHz	70 kΩ	SMD3215		QTS3	32.768 kHz	70 kΩ
					SMD5019		QTS5	32.768 kHz	70 kΩ
					SMD7015		QTS7	32.768 kHz	65 kΩ
					SMD8038		QTS8	32.768 kHz	50 kΩ

Note: AEC Q200: -40°C ~ +105°C




OSCILLATOR MHz Range

RIVER			Case Size	UTECH						
Picture	Type	Frequency Range	Size	Picture	Type	Frequency Range				
			SMD1210							
■	FCXO-07 (1.6 x 1.2 x 0.70 mm)	3 ~ 80 MHz	SMD1612							
■	FCXO-06 (2.0 x 1.6 x 0.80 mm 8.6 mg +85°C)	1 ~ 100 MHz	SMD2016	■	QOS1 (2.0 x 1.6 x 0.80 mm)	1 ~ 125 MHz				
	FCXO-06W (2.0 x 1.6 x 0.80 mm 8.6 mg +105°C)									
	FCXO-06T (2.0 x 1.6 x 0.80 mm 8.6 mg +105°C) High-precision frequency									
■	FCXO-06E (2.0 x 1.6 x 0.80 mm 8.6 mg +105°C) Excellent phase-noise performance	1 ~ 50 MHz	SMD2520	■	QOS2 (2.5 x 2.0 x 0.90 mm)	1 ~ 125 MHz				
	FCXO-05 (2.5 x 2.0 x 0.90 mm 12 mg +85°C)	1 ~ 80 MHz								
	FCXO-05W (2.5 x 2.0 x 0.90 mm 12 mg +105°C) High-precision frequency									
		1 ~ 50 MHz	SMD3225	■	QOS3 (3.2 x 2.5 x 1.00 mm)	1 ~ 125 MHz				
							SMD5032	■	QOS5 (5.0 x 3.2 x 1.30 mm)	1 ~ 125 MHz
							SMD7050	■	QOS7 (7.0 x 5.0 x 1.50 mm)	1 ~ 200 MHz

OSCILLATOR kHz Range

RIVER			Case Size	UTECH		
Picture	Type	Frequency Range	Size	Picture	Type	RIVER
			SMD1210			
■	FCXO-07D (1.6 x 1.2 x 0.70 mm)	32.768 kHz	SMD1612			
■	FCXO-06C (2.0 x 1.6 x 0.80 mm 8.6 mg +105°C (available from ±7 ppm @ +25°C))	32.768 kHz 22.0 ~ 87.0 kHz	SMD2016	■	QOS1 (2.0 x 1.6 x 0.80 mm)	32.768 kHz
	FCXO-06D (2.0 x 1.6 x 0.80 mm 8.6 mg +105°C) (Ultra-low current consumption, 0.03 mA Max.)	32.768 kHz				
■	FCXO-05C (2.5 x 2.0 x 0.90 mm 13 mg +105°C (available from ±7 ppm @ +25°C))	32.768 kHz 22.0 ~ 87.0 kHz	SMD2520	■	QOS2 (2.5 x 2.0 x 0.90 mm)	32.768 kHz
	FCXO-05D (2.5 x 2.0 x 0.90 mm 13 mg +105°C (The lowest current consumption in its class, 0.01 mA Max.))	32.768 kHz				
			SMD3225	■	QOS3 (3.2 x 2.5 x 1.00 mm)	32.768 kHz
			SMD5032	■	QOS5 (5.0 x 3.2 x 1.30 mm)	32.768 kHz
			SMD7050			

TCXO and VCTCXO MHz Range

UTECH							
Picture	Type	Type	TCXO		VCTCXO		
			Frequency Range	Stability * (-40°C +85°C, Tolerance „over all“)	Frequency Range	Stability *	APR * (Absolute Pulling Range):
	SMD2016	QOS1 (2.0 x 1.6 x 0.80 mm)	32.768 kHz ~100 MHz	±2 ppm	32.768 kHz ~100 MHz	±2 ppm	±5 ppm
	SMD2520	QOS2 (2.5 x 2.0 x 0.90 mm)	32.768 kHz ~100 MHz	±2 ppm	32.768 kHz ~100 MHz	±2 ppm	±5 ppm
	SMD3225	QOS3 (3.2 x 2.5 x 1.00 mm)	32.768 kHz ~100 MHz	±2 ppm	32.768 kHz ~100 MHz	±2 ppm	±5 ppm
	SMD5032	QOS5 (5.0 x 3.2 x 1.30 mm)	32.768 kHz ~100 MHz	±2 ppm	32.768 kHz ~100 MHz	±2 ppm	±5 ppm

Note: * typical values; other values on request