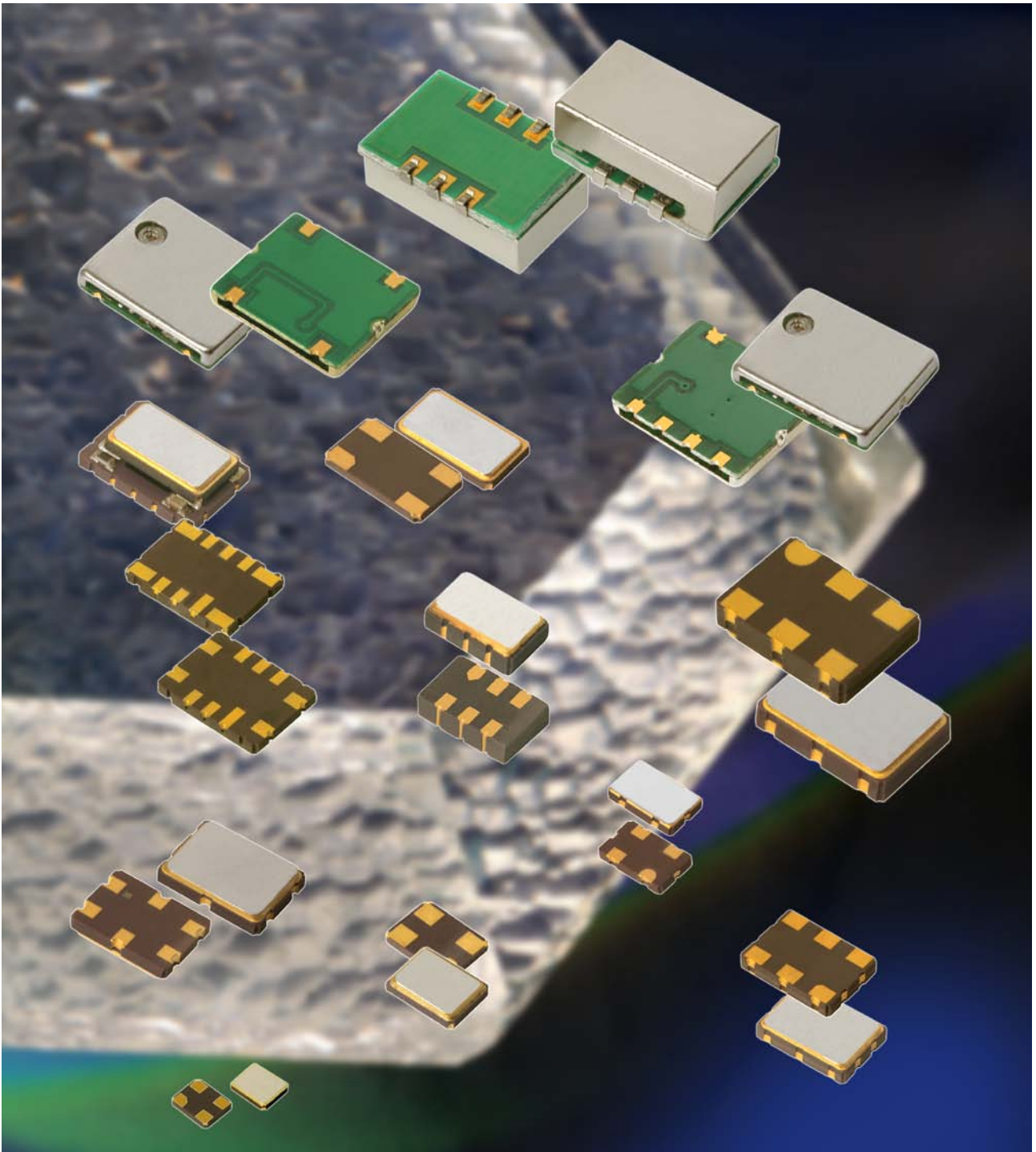
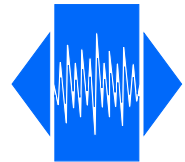


SPXO

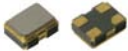

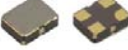





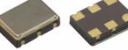

MORE THAN FREQUENCY

Single Packaged Crystal Oscillators




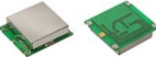


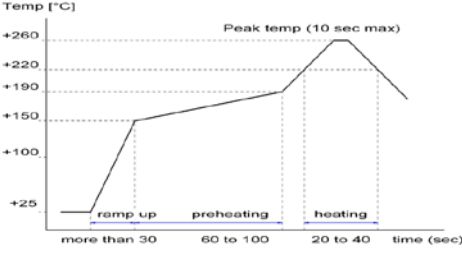


Surface-Mounted Type



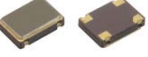
Type	Package Size	Frequency Range	Supply Voltage	Output Signal	Package Type
	[mm]	[MHz]	[V]		
MCO-7S <i>New</i>	2.0 x 1.6	1 MHz to 80 MHz	1.8 V, 2.5 V & 3.3 V	CMOS	
MCO-6S	2.5 x 2.0	1 MHz to 80 MHz	1.8 V, 2.5 V & 3.3 V	CMOS	
MCO-5S <i>New</i>	3.2 x 2.5	32.768 kHz to <i>170 MHz</i>	1.8 V, 2.5 V & 3.3 V	HCMOS / TTL	
MCO-3S	5.0 x 3.2	32.768 kHz to 125 MHz	1.8 V, 2.5 V & 3.3 V	HCMOS / TTL	
		12 kHz to 75 MHz	5.0 V		
MCO-3S-PE-6p	5.0 x 3.2	20 MHz to 250 MHz	2.5 V 3.3 V	LVPECL	
MCO-3S-DS-6p	5.0 x 3.2	20 MHz to 250 MHz	2.5 V 3.3 V	LVDS	
MCO-2S	6.0 x 3.5	2.0 MHz to 125 MHz	3.3 V 5.0 V	HCMOS / TTL	
MCO-1S	7.0 x 5.0	12 kHz to 200 MHz	1.8 V, 2.5 V, 2.8 V 3.3 V & 5.0 V	HCMOS / TTL	
MCO -1S-CSS low EMI, spread spectrum	7.0 x 5.0	8 MHz to 170 MHz	3.3 V	CMOS	
MCO-1S-PE-6p	7.0 x 5.0	20 MHz to 250 MHz	1.8 V, 2.5 V, 2.8 V 3.3 V & 5.0 V	LVPECL	
MCO-1S-PEM-6p multiplier	7.0 x 5.0	100 MHz to 700 MHz	3.3 V	LVPECL	
MCO-1S-DS-6p	7.0 x 5.0	20 MHz to 250 MHz	1.8 V, 2.5 V, 2.8 V 3.3 V & 5.0 V	LVDS	
MCO-1S-DSM-6p multiplier	7.0 x 5.0	100 MHz to 700 MHz	3.3 V	LVDS	
PXO-P9-H-4p	14.0 x 9.0	20 MHz to 200 MHz	2.5 V, 3.3 V & 5.0 V	HCMOS	
PXO-P9-PE-6p	14.0 x 9.0	20 MHz to 250 MHz	1.8 V, 2.5 V, 2.8 V 3.3 V	LVPECL	
PXO-P9-PEM-6p multiplier	14.0 x 9.0	100 MHz to 700 MHz	3.3 V	LVPECL	
PXO-P9-DS-6p	14.0 x 9.0	20 MHz to 250 MHz	1.8 V, 2.5 V, 2.8 V 3.3 V	LVDS	
PXO-P9-DSM-6p multiplier	14.0 x 9.0	100 MHz to 700 MHz	3.3 V	LVDS	

Surface-Mounted Type

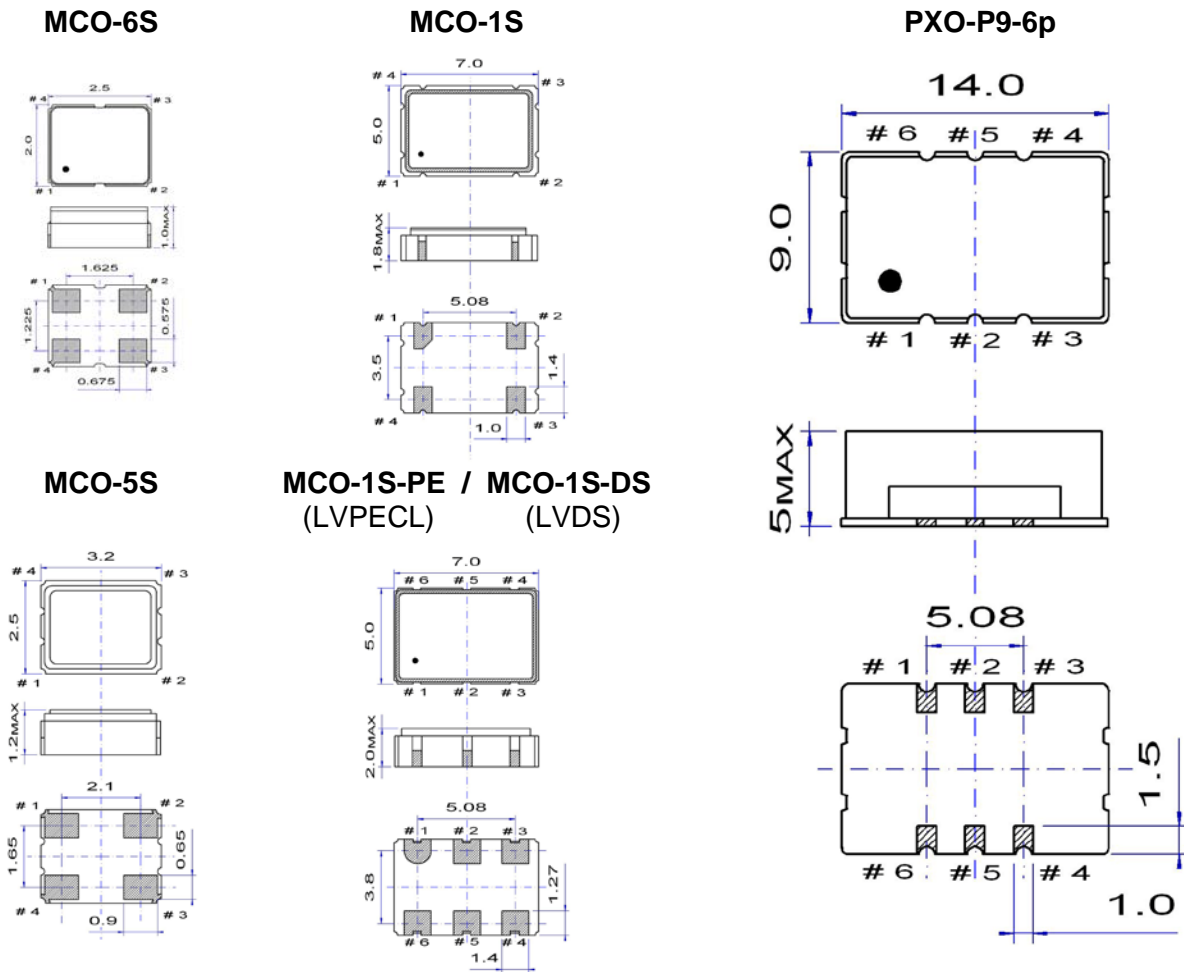
Type	Package Size	Frequency Range	Supply Voltage	Output Signal	Package Type
	[mm]	[MHz]	[V]		
PXO-SM-4J	14.0 x 9.8 plastic moulded with J-lead	1.5 MHz to 70 MHz	3.3 V 5.0 V	HCMOS / TTL	
PXO-SMP-4J <i>programmable</i>	14.0 x 9.8 plastic moulded with J-lead	1.5 MHz to 70 MHz	3.3 V 5.0 V	HCMOS / TTL	
PXO-SK-H-4p	20.0 x 12.5	2 MHz to 150 MHz	3.3 V 5.0 V	HCMOS / TTL	
PXO-SW-H-5p	21.3 x 18.1	100 MHz to 400 MHz	3.3 V 5.0 V	sine wave 0 dB	

Parameters		Example for IR reflow soldering temperature
all inclusive stability, tolerance, ageing, supply & load change	±25 ppm to ±50 ppm (tighter accuracy on request)	
jitter (rms)	0.5 ps at 12 kHz ~ 20 MHz from carrier	
operating temperature range	-20 ~ +70 °C commercial application -40 ~ +85 °C industrial application -55 ~ +125 °C on request	
storage temperature range	-55 ~ +125 °C	
packing SMD type	tape & reel: 500, 1k or 2k pieces	
packing through hole type	25 pcs per tube or 50 pcs per tray	

SPXO-P Single Packaged Crystal Oscillator Programmable

Type	Package Size	Frequency Range	Supply Voltage	Output Signal	Package Type
	[mm]	[MHz]	[V]		
MCO-6S-P	2.5 x 2.0	1 MHz to 133 MHz	1.8 V	CMOS	
		1 MHz to 166 MHz	2.5 V		
		1 MHz to 200 MHz	3.3 V		
MCO-5S-P	3.2 x 2.5	1 MHz to 133 MHz	1.8 V	CMOS	
		1 MHz to 166 MHz	2.5 V		
		1 MHz to 200 MHz	3.3 V		
MCO-1S-P	7.0 x 5.0	6 MHz to 100 MHz	3.3 V	CMOS / TTL	
		6 MHz to 160 MHz	5.0 V		

Surface-Mounted Package



Required specification for quotation request		Units	Example
Type			MCO-1S-DS-25-6p
nominal frequency		MHz	125.000 MHz
frequency stability (all inclusive): stability vs. temperature, tolerance @ +25 °C, aging, supply & load variation		ppm	±25 ppm
operating temperature range		°C	-30 to +85 °C
supply voltage		V	2.5 V
output signal	HCMOS / TTL, LVPECL, LVDS		LVDS
output load	HCMOS / TTL	15 pF	
	LVPECL	50 Ω @ Vdc - 2.0 V	
	LVDS	100 Ω	100 Ω
special output load on request			
enable / disable function	[yes or no]		Pin # 1
jitter (rms or period jitter)	(specify only if important)	ps	< 3 ps
phase noise	(specify only if important)	dBc/Hz	