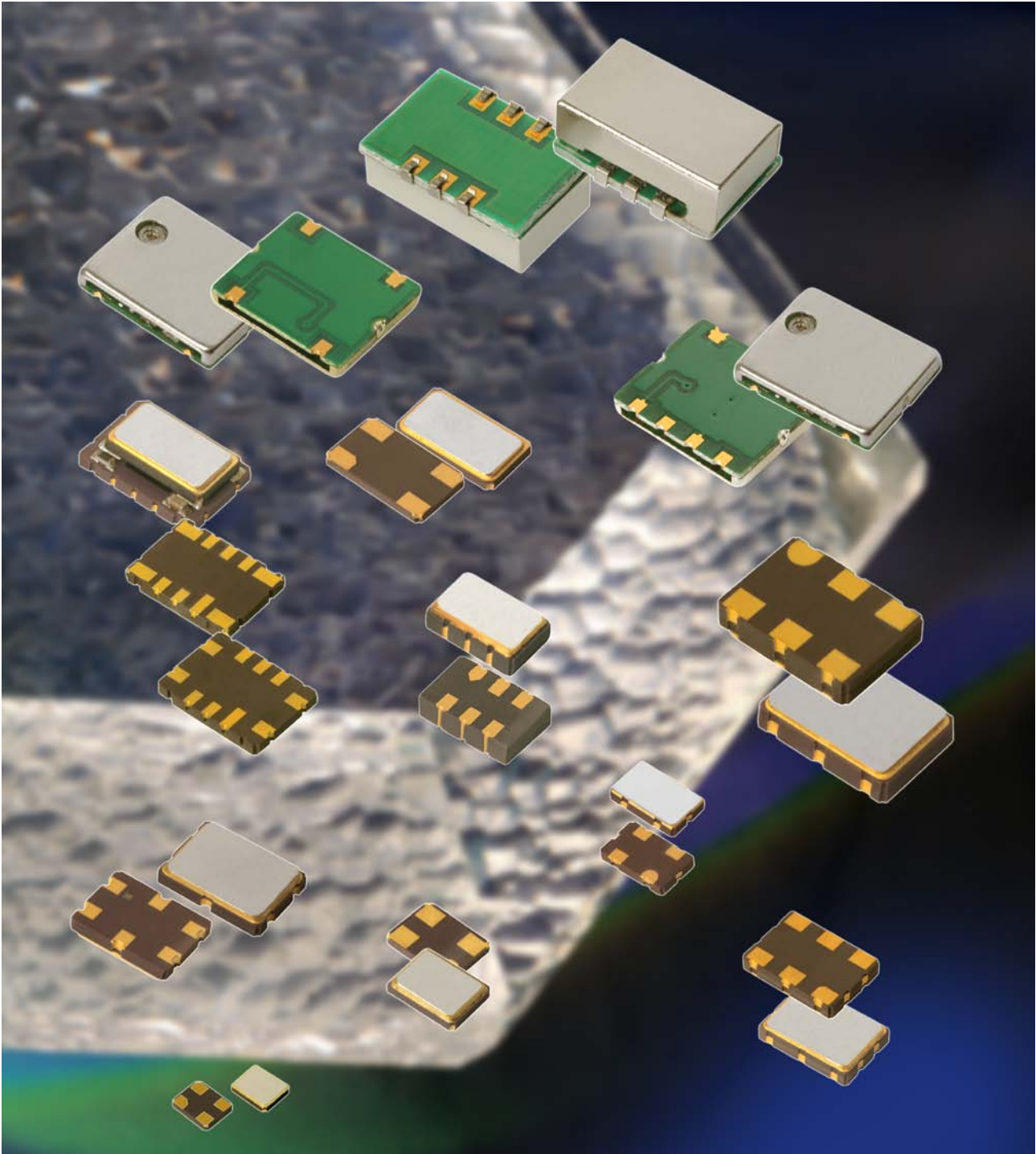


TCXO

MORE THAN FREQUENCY

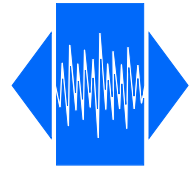
Temperature Compensated Crystal Oscillators



Vertrieb und Produktinformation:

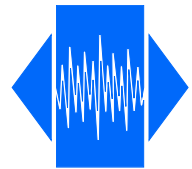
Melatronik Nachrichtentechnik GmbH

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Surface-Mounted Type

Type	Package Size	Frequency Range	Supply Voltage	Frequency Adjustment	Output Signal	Package Type
	[mm]	[MHz]	[V]	[ppm]		
TX7-252	2.5 x 2.0	16 MHz to 52 MHz	2.8 V	none	clipped sine wave	
TX7-302	3.2 x 2.5	10 MHz to 52 MHz	2.8 V 3.3 V 5.0 V	none	clipped sine wave CMOS	
TX7-503	5.0 x 3.2	10 MHz to 52 MHz	2.8 V 3.3 V 5.0 V	none	clipped sine wave CMOS	
TX7-503-SQ on request -55 to 95°C	5.0 x 3.2	10 MHz to 52 MHz	2.8 V 3.3 V 5.0 V	none	clipped sine wave CMOS	
TX7-705-TQ on request -55 to 95°C	7.0 x 5.0	5 MHz to 52 MHz	2.8 V 3.3 V 5.0 V	none	clipped sine wave CMOS	
TX7-705-SQ on request -55 to 95°C	7.0 x 5.0	5 MHz to 52 MHz	2.8 V 3.3 V 5.0 V	none	clipped sine wave CMOS	
TX7-705-SQ-ST3 STRATUM III	7.0 x 5.0	5 MHz to 52 MHz	2.8 V 3.3 V 5.0 V	none	clipped sine wave CMOS	
TX7-705-CoSa COSPAS SARSAT	7.0 x 5.0	10 MHz to 32 MHz	2.8 V 3.3 V 5.0 V	none	clipped sine wave CMOS	
TX3-801B	11.4 x 9.6	9.6 MHz to 61.44 MHz	3.0 V 3.3 V 5.0 V	> ± 5 ppm internal trimmer	clipped sine wave	
TX3-801HT	11.4 X 9.6	9.6 MHz to 61.44 MHz	3.0 V 3.3 V 5.0 V	> ± 5 ppm internal trimmer	HCMOS	
TX3-801H-HP	11.4 X 9.6	9.6 MHz to 200 MHz	3.0 V 3.3 V 5.0 V	none	HCMOS	
TX3-808DS	11.4 x 9.6	50 MHz to 200 MHz	3.0 V 3.3 V 5.0 V	none	LVDS	
TX3-808PE	11.4 x 9.6	50 MHz to 200 MHz	3.0 V 3.3 V 5.0 V	none	LVPECL	
TXO-P9-H	14.0 x 9.0	10 MHz to 200 MHz	3.3 V 5.0 V	none	HCMOS	
TXO-P9-S	14.0 x 9.0	10 MHz to 200 MHz	3.3 V 5.0 V	none	Sine wave	
TXO-SH-S	20.0 x 13.0	10 MHz to 200 MHz	3.3 V 5.0 V	none	Sine wave	
TXO-SK-S	20.0 x 13.0	10 MHz to 200 MHz	3.3 V 5.0 V	none	Sine wave	
TX5-HL	18.3 x 11.8 gullwing	1.5 MHz to 200 MHz	3.3 V 5.0 V	> ± 5 ppm internal trimmer	HCMOS	



STRATUM III

Applications	<ul style="list-style-type: none"> • SONET / SDH • Synchronous Equipment Timing Source • Synchronous Ethernet • IEEE 1588 version 2
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Type	Package Size	Frequency Range	Supply Voltage	Frequency Tolerance ex factory	Output Signal	Standard Frequency	Package Type
	[mm]	[MHz]	[V]	[ppm]		[MHz]	
TX7-503C-ST3	5.3 x 3.2	10 MHz to 40 MHz	2.8 V 3.3 V 5.0 V	± 0.5 ppm	HCMOS	19.44 MHz 20.00 MHz 25.00 MHz 26.00 MHz	
TX7-705-C-ST3	7.0 x 5.0	10 MHz to 32 MHz	2.8 V 3.3 V 5.0 V	± 0.5 ppm	clipped sine wave HCMOS	12.80 MHz 19.44 MHz 20.00 MHz 25.00 MHz	
TX7-705-TQ-ST3	7.0 x 5.0	5 MHz to 50 MHz	2.8 V 3.3 V 5.0 V	± 0.5 ppm	clipped sine wave HCMOS	12.80 MHz 19.44 MHz 20.00 MHz 25.00 MHz	
TX7-705-SQ-ST3	7.0 x 5.0	5 MHz to 50 MHz	2.8 V 3.3 V 5.0 V	± 0.5 ppm	clipped sine wave HCMOS	12.80 MHz 19.44 MHz 20.00 MHz 25.00 MHz	
TXO-P9-H-ST3	14.0 x 9.0	10 MHz to 200 MHz	2.8 V 3.3 V 5.0 V	± 0.5 ppm	HCMOS	12.80 MHz 19.44 MHz 20.00 MHz 100.00 MHz	
TX6-464H-ST3	DIL 14/4 pin	10 MHz to 200 MHz	3.3 V 5.0 V	± 0.5 ppm	HCMOS	12.80 MHz 19.44 MHz 20.00 MHz 100.00 MHz	


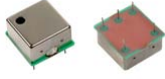

Frequency stability	ITU-T G.813 option 1	Phase Noise @ 40 MHz
all inclusive: vs temperature, tolerance @ +25 °C, ageing over 20 years, supply & load change	±4.6 ppm	- 87 dBc/Hz @ 10 Hz - 113 dBc/Hz @ 100 Hz - 135 dBc/Hz @ 1 kHz - 152 dBc/Hz @ 10 kHz - 157 dBc/Hz @ 100 kHz
versus operating temperature	±0.28 ppm	
holdover stability over 24 hours	±0.37 ppm	
calibration @ +25 °C	±0.5 ppm	
ageing over 20 years	±3.0 ppm	
operating temperature range	-20 ~ +70 °C commercial application -40 ~ +85 °C industrial application	
storage temperature range	-55 ~ +125 °C	
packaging units for SMD type	tape & reel 500 or 1k pieces	

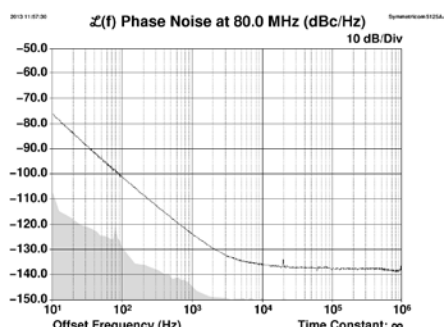
Vertrieb und Produktinformation:

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Through Hole Type

Type	Package Size	Frequency Range	Supply Voltage	Frequency Adjustment	Output Signal	Package Type
	[mm]	[MHz]	[V]	[ppm]		
TX5-SP	DIL 14 / 4 pin	9.6 MHz to 200 MHz	3.3 V 5.0 V	> ± 5 ppm internal trimmer	sine wave	
TX5-AP					clipped sine wave	
TX5-HP	DIL 14 / 4 pin	1.5 MHz to 200 MHz	3.3 V 5.0 V	> ± 5 ppm internal trimmer	HCMOS	
TX6-H	DIL 14 / 4 pin	1 MHz to 200 MHz	3.3 V 5.0 V	none	sine wave HCMOS	
TXE-H	20 x 20 height = 10	10 MHz to 200 MHz	3.3 V 5.0 V	> ± 5 ppm internal trimmer	sine wave clipped sine wave HCMOS	
TXU-S	36 x 26 height = 10	10 MHz to 50 MHz	3.3 V 5.0 V 9 ~ 12 V	> ± 5 ppm external potentiometer	sine wave square wave (open collector)	

Parameters		Phase Noise @ 80.0 MHz
all inclusive: stability, tolerance, ageing, supply & load change	±2.0 ppm ~ ±5.0 ppm	
versus operating temperature	±0.1 ppm ~ ±2.5 ppm	
operating temperature range	-20 ~ +70 °C commercial application -40 ~ +85 °C industrial application	
storage temperature range	-55 ~ +125 °C	
packing through hole type	25 pieces per tube or 50 pieces per tray	

Required specification for quotation request		Units	Example
Type			TX3-801
nominal frequency		MHz	19.200 MHz
frequency stability vs. temperature range		ppm	±2.5 ppm
operating temperature range		°C	-20 to +70 °C
supply voltage		V	3.3 V
output signal:	clipped sine wave, sine wave, HCMOS / TTL	V	clipped sine wave
output load:	clipped sine wave	kΩ // pF	10 kΩ // 10 pF
	sine wave	Ω	
	HCMOS / TTL	pF	
special output load on request			
frequency adjustment	by internal trimmer or by external trimmer by external potentiometer	ppm	±3 ppm
phase noise		dBc/Hz	< -132 dBc/Hz @ 1 kHz < -143 dBc/Hz @ 10 kHz < -148 dBc/Hz @ 100 kHz