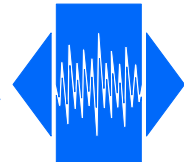


TX7-503CM-SQ-CoSa

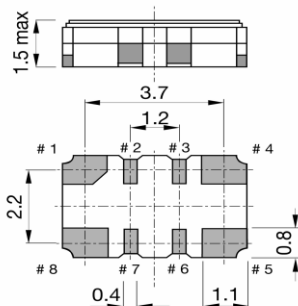
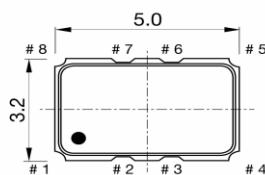
Analogue Temperature Compensated Xtal Oscillator
 COSPAS SARSAT compliant CMOS TCXO

QuartzCom
 the communications company



Application: Emergency beacon Class 1 & 2

Standard frequencies	10.000 MHz, 12.678303 MHz 12.800 MHz, 16.384, 20.000 MHz		
Frequency stability:			
vs. temperature reference to (F _{MAX} +F _{MIN})/2	≤ ±0.2 ppm ≤ ±0.2 ppm	-20 ~ +55 °C -40 ~ +55 °C	Class 2 beacon Class 2 beacon
vs. supply voltage	≤ ±0.1 ppm	±5 %	
vs. load	≤ ±0.1 ppm	±5 %	
vs. aging	≤ ±1.0 ppm ≤ ±3.0 ppm	1 st year 10 years	
Frequency tolerance @ +25 °C	≤ ±0.5 ppm		
Frequency tolerance after reflow	≤ ±0.5 ppm		
Allan variance (ADEV)	0.1 ppb (1x10 ⁻¹⁰)	@ τ = 0.1 ~ 1.0 sec	
Medium-term stability: Mean slope ΔF/dt after 15 min power-up: steady state during temperature ramp Residual ΔF (r.m.s.) from slope	≤ ±0.7 ppb/min. ≤ ±1.7 ppb/min. ≤ 2.0 ppb	T = const. ΔT/dt = ± 5 °C/hour over 18 points	
Supply voltage	+3.3 V	±5 %	
Supply current	4 mA	Max.	
Output signal	CMOS	V _{OH} > 0.9*V _d c V _{OL} < 0.1*V _d c	
Output load	15 pF	±5 %	
Symmetry (Duty)	45 % ~ 55 %	@ ½ V _d c	
Phase noise @ 12.678303 MHz	<-90 dBc/Hz <-115 dBc/Hz <-130 dBc/Hz <-140 dBc/Hz <-145 dBc/Hz	@ 10 Hz @ 100 Hz @ 1 kHz @ 10 kHz @ 100 kHz	
Operating temperature range	-20 ~ +55 °C -40 ~ +55 °C	Class 2 beacon Class 1 beacon	
Storage temperature range	-55 ~ +125 °C		

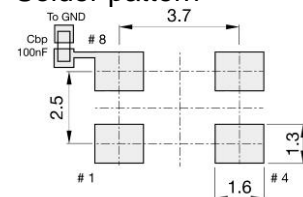


Pin function

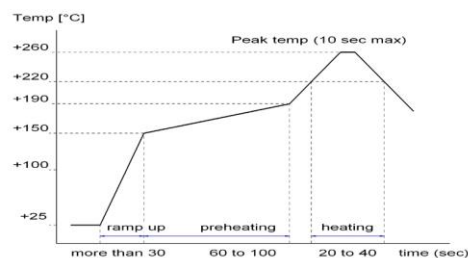
- # 1 Do not connect
- # 4 GND
- # 5 OUTPUT
- # 8 V_dc

Do not connect: #2, #3, #6 & #7

Solder pattern



IR reflow soldering temperature



2011/65/EU RoHS compliant

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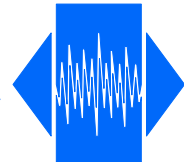
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TX7-503CM-SQ-CoSa

Analogue Temperature Compensated Xtal Oscillator
 COSPAS SARSAT compliant CMOS TCXO

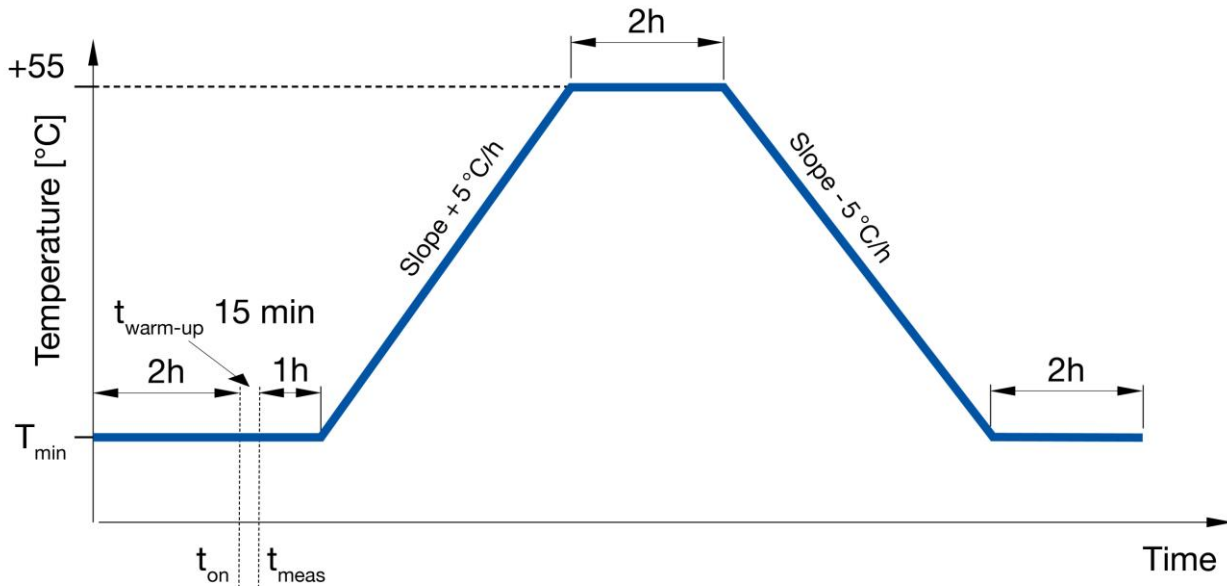
QuartzCom
 the communications company



Application: Emergency beacon Class 1 & 2

Medium term stability

Frequency stability measurement procedure according the COSPAS-SARSAT T.001



Note #1: T_{min} = -20 °C (Class 2 beacon)
 T_{ON} = beacon turn-ON time after 2 hours “cold soak”
 T_{meas} = start time of frequency stability measurement (TON + 15 min)

Note: #2 The 2h and 1h warm-up and stabilisation times are for type approval test of complete beacon. For testing of TCXO these times may be shortened accordingly.

Environmental	Reference STD.		Test condition
Vibration sinusoidal	IEC 60028-2-6	IEC 60679-1-5.6.7	Test Fc, 30 min per axis 10 Hz – 55 Hz 0.75mm, 55 Hz – 2 kHz 10 g
Shock	IEC 60028-2-27	IEC 60679-1-5.6.8	Test Ea, 3 x per axes 100 g, 6 ms half-sine pulse
Solderability	IEC 60028-2-20 IEC 60028-2-58	IEC 60679-5.6.3	Test Ta (235 ±2) °C Method 1 Test Tb Method 1A, 5s