



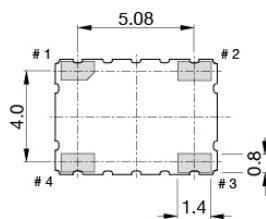
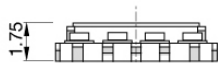
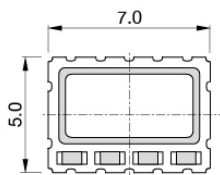
TCXO for BeiDou satellite navigation systems

- High frequency stability vs. temperature: $\pm 0.10 \sim \pm 0.25$ ppm
- Output signal clipped sine wave or CMOS
- Low G-sensitivity (on request), shock resistant
- Low phase noise, low Allan deviation



TX7-705CM-TQN-BDS

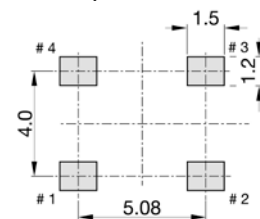
Standard frequencies	10.0, 16.320, 19.20, 20.0 & 25.0 MHz		
Frequency stability			
vs. temperature reference (F _{MAX} +F _{MIN})/2	$\leq \pm 0.10$ ppm $\leq \pm 0.20$ ppm $\leq \pm 0.25$ ppm	over -20 ~ +70 °C over -40 ~ +85 °C over -40 ~ +95 °C	
vs. supply voltage changes reference to frequency at nominal supply	$\leq \pm 0.05$ ppm	± 5 %	
vs. load changes reference to frequency at nominal load	$\leq \pm 0.05$ ppm	± 10 %	
vs. aging	$\leq \pm 0.6$ ppm $\leq \pm 2.5$ ppm	1 st year 10 years	
Frequency slope vs. temperature	≤ 0.02 ppm/°C	over operating temperature	
Short term stability ADEV	$< 1 \times 10^{-10}$	□ = 1 sec.	
G-sensitivity	≤ 1.5 ppb/g ≤ 0.5 ppb/g	Gamma Γ standard Gamma Γ	
Frequency tolerance ex factory	$\leq \pm 1.0$ ppm	@ +25°C	
Supply voltage	+3.3 V	± 5 %	
Current consumption	< 3 mA		
Output waveform	CMOS	V _{OH} ≥ 0.9 V _{CC}	V _{OL} ≤ 0.1 V _{CC}
Output load	15 pF	Max.	
Symmetry (Duty)	45 ~ 55 %	@ 1/2 V _{CC}	
Phase noise @ 20 MHz	< -95 dBc/Hz < -125 dBc/Hz < -145 dBc/Hz < -155 dBc/Hz < -155 dBc/Hz	@ 10 Hz @ 100 Hz @ 1 kHz @ 10 kHz @ 100 kHz	
Operating temperature range	-40 ~ +85 °C		
Storage temperature range	-55 ~ +105 °C		
Reflow conditions per JEDEC J-STD-020	260 °C maximum	during 10 sec. Max.	
Moisture sensitivity	Level 1 (unlimited)		



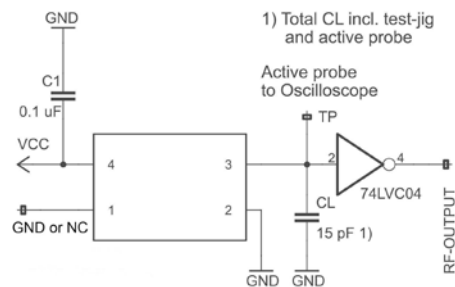
Pin function

- # 1 GND or NC
- # 2 GND
- # 3 RF output
- # 4 Vcc

Solder pattern



Test circuit



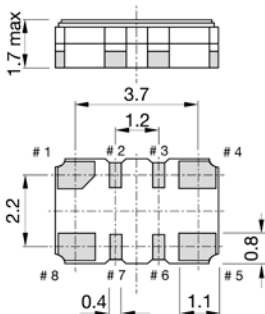
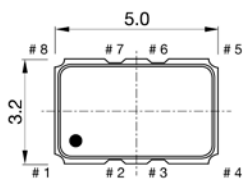


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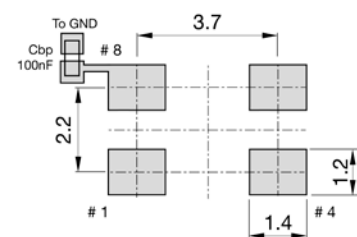
TX7-503CM-SQ-BDS			
Standard frequencies	10.0, 16.320, 19.20, 20.0 & 25.0 MHz		
Frequency stability			
vs. temperature reference (F _{MAX} +F _{MIN})/2	$\leq \pm 0.10$ ppm $\leq \pm 0.20$ ppm $\leq \pm 0.25$ ppm	over -20 ~ +70 °C over -40 ~ +85 °C over -40 ~ +95 °C	
vs. supply voltage changes reference to frequency at nominal supply	$\leq \pm 0.05$ ppm	± 5 %	
vs. load changes reference to frequency at nominal load	$\leq \pm 0.05$ ppm	± 10 %	
vs. aging	$\leq \pm 0.8$ ppm $\leq \pm 3.0$ ppm	1 st year 10 years	
Frequency slope vs. temperature	≤ 0.02 ppm/°C	over operating temperature	
Short term stability ADEV	$< 1 \times 10^{-10}$	□ = 1 sec.	
G-sensitivity	≤ 1.5 ppb/g	Gamma Γ	
Frequency tolerance ex factory	$\leq \pm 1.0$ ppm	@ +25°C	
Supply voltage	+3.3 V	± 5 %	
Current consumption	< 3 mA		
Output waveform	CMOS	V _{OH} ≥ 0.9 V _{CC}	V _{OL} ≤ 0.1 V _{CC}
Output load	12 pF	Max.	
Symmetry (Duty)	45 ~ 55 %	@ 1/2 V _{CC}	
Phase noise @ 20 MHz	< -95 dBc/Hz < -125 dBc/Hz < -145 dBc/Hz < -155 dBc/Hz < -155 dBc/Hz	@ 10 Hz @ 100 Hz @ 1 kHz @ 10 kHz @ 100 kHz	
Operating temperature range	-40 ~ +85 °C		
Storage temperature range	-55 ~ +105 °C		
Reflow conditions per JEDEC J-STD-020	260 °C maximum	during 10 sec. Max.	
Moisture sensitivity	Level 1 (unlimited)		



Pin function

- # 1 GND or NC
- # 2 do not connect
- # 3 do not connect
- # 4 GND
- # 5 OUTPUT
- # 6 do not connect
- # 7 do not connect
- # 8 Vcc

Foot print



Test circuit

