

VTX70S3A/B Series

Stratum 3, VC-TCXO, 7.0 x 5.0mm, Clipped sine wave/HCMOS



Stratum 3 compliant
Two different pad layouts available
Surface mount type
REACH, RoHS compliant



Parameters		Specification		Remarks
Frequency range		F_nom	9.6MHz ~ 50.0MHz	
Supply voltage		Vcc	3.3V, 5.0V	Vcc±5%
Frequency stability (overall, 20 years)		F_all	±4.6ppm	Including initial tolerance, freq. stability over temperature, load change, Vcc change, 20 year aging and reflow soldering.
Initial frequency tolerance		F_tol	±1.0ppm	At +25°C±2°C, within 30 days after ex-works
Frequency stability (Typical @ 10.0MHz)	vs Temperature	F_stb	±0.05ppm ~ ±2.0ppm	Over -40°C ~ +85°C, fref=(fmax+fmin)/2
	vs Load	F_load	±0.1ppm max	±5% load condition change
	vs Voltage	F_Vcc	±0.1ppm max	±5% input voltage change
	vs Day Aging	F_age	±0.02ppm/year max	At +25°C and after 1h of operation
	vs Year aging		±1.0ppm/year max	
Operating temperature range (°C)		Topr	-20°C ~ +70°C, -30°C ~ +75°C, -40°C ~ +85°C	
Storage temperature (°C)		Tstg	-55°C ~ +105°C	
Output wave form			Clipped sine wave(CSW), HCMOS	
Output load			CSW: 10KΩ//10pF HCMOS: 15pF	
Output voltage level (CSW)			0.8V p-p (min)	
Output voltage level (HCMOS)			Voh: 80% Vcc, Vol: 20% Vcc	
Rise time and Fall time (HCMOS)		Tr, Tf	8.0ns max	10% to 90% of waveform
Duty cycle (HCMOS)		Sym	45%/55%	Measured at 50% Vcc
Current consumption		Icc	15.0mA max	
VC-TCXO option only				
Control Voltage		Vc	1.65V ± 1.65V, 2.5 ± 2.5V	
Frequency tuning (ppm)			±10.0ppm min ~ ±15.0ppm max	For custom specification please enquire
Linearity/Slope polarity			±10.0% max/Positive slope	Positive voltage for positive frequency shift

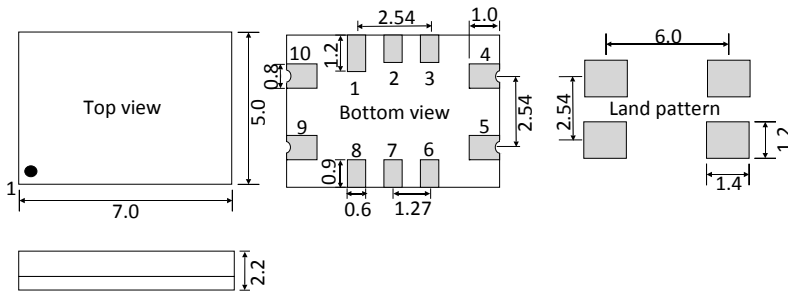
Phase noise (10.0MHz typical)		dBc/Hz typical
10Hz		-95
100Hz		-120
1kHz		-138
10kHz		-145
100kHz		-148

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Dimensions (mm)



(V)TX70S3A type

(10 pad)

Pad 1, 2, 3, 6, 7, 8: Do not connect

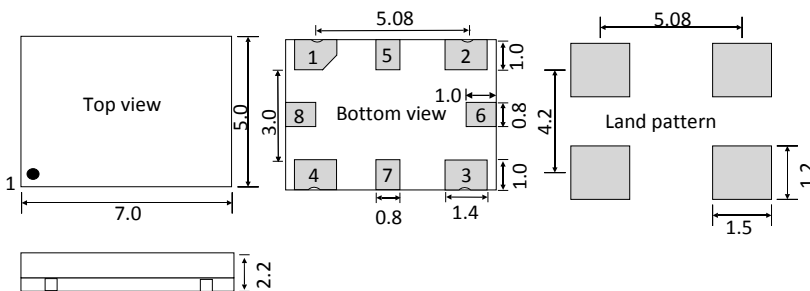
Pad 4: Ground

Pad 5: Output

Pad 9: Supply Voltage

Pad 10: NC for TCXO, Voltage control for VCTCXO

Dimensions (mm)



(V)TX70S3B type

(8 pad)

Pad 1: NC for TCXO, Voltage control (Vc) for VCTCXO

Pad 2: GND

Pad 3: Output

Pad 4: Supply voltage Vcc

Pad 5, 6, 7, 8: NC

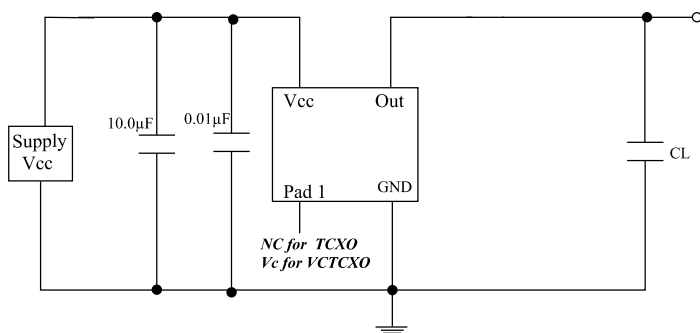
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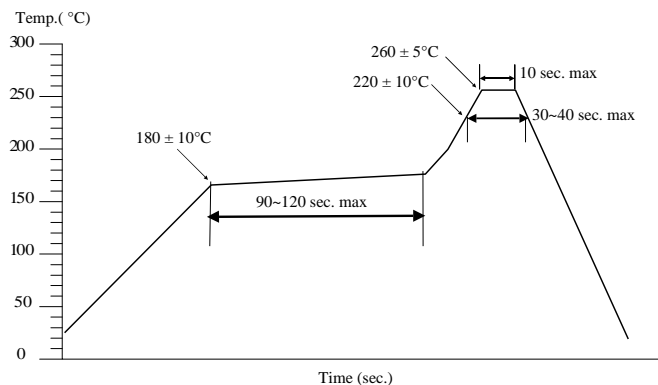


TCXO part number generation									
TX70S3A	2600	W	B	K	B	X	Z	L	-PF
ACT series Code	Frequency (MHz) Ex. 26.00MHz	Temp. stability (±ppm)	Supply voltage (V)	Operating temp. range (°C)	Output wave	Electrical tuning (±ppm)	Duty Cycle (%/%)	Tape & Reel	RoHS Code
10 pad option TCXO = TX70S3A VCTCXO = VTX70S3A 8 pad option TCXO = TX70S3B VCTCXO = VTX70S3B	26MHz = 2600 8MHz = 0800 < 100MHz First 4 digit of frequency > 100MHz First 5 digit of frequency	0.05 = A 0.10 = B 0.28 = W 0.5 = R 1 = P 2 = N	3.3V = B 5.0V = A	-20 ~ +70 = B -30 ~ +75 = W -40 ~ +85 = K	CSW = B HCMOS = E	For TCXO None = X For VCTCXO ±10 ~ ±15ppm = Y	For CSW Not specified = Z For HCMOS 45/55 = H	Loose = L 1000 = C	-PF
Note: It is important to suffix the above part number with full frequency required to give a completed part number as illustrated below. Full Example Part Number : TX70S3A2600WBK BXZL-PF [26MHz] , VTX70S3A1474WBK BXZL-PF [14.7456MHz]									

HCMOS test circuit



Solder reflow profile



Drawing control: (Internal use only)
 Commodity code: 854370 90 99
 Issue number : N1
 Date : 09/11/2017
 Internal reference : D1