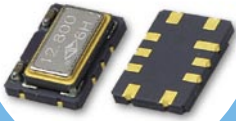


TS Type Stratum III Voltage Controlled Temperature Compensated Crystal Oscillator

Actual Size



FEATURE

1. Typical 7.0 × 5.0 × 2.0 mm ceramic SMD package.
2. Stratum 3 (Overall ±4.6ppm including 20 years aging)
3. CMOS and Clipped Sine wave (without DC-cut capacitor) output optional.
4. Packing: Tape & Reel 1000/3000 pcs per Reel.

ORDERING INFORMATION

Select option

TCXO	Package (mm)	Supply Voltage (V)	Pulling Range	Freq. Stability (ppm)	Temp. Range (°C)	Output Logic and Symmetry	Oscillator Mode	Appearance	Lead Free	Dash	Freq. (MHz)
	S: 7.0 × 5.0 × 2.0	C:5V E:3.3V	A: ± 5 B: ± 8 T:TCXO	T: ±4.6 (Including 20 Years Aging)	C: -20~+70 L: -40~+85	50±5% CMOS 15pF S: Clipped Sine Wave J	-A: AT Fundamental NOT SELECTABLE BY CUSTOMER	N: Normal	F: RoHS Compliant		XX.XXXXXX

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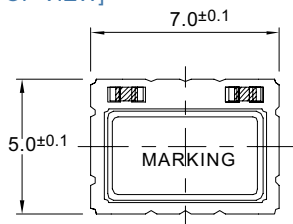
Example TSEATLJANF-12.800000

TCXO S-TYPE; V_{DD}:3.3V; Pulling Range: ±5ppm; Freq. Stability: ±4.6 (Including 20 Years Aging); Temp. Range: -40°C to +85°C; Load: CMOS 15pF, Symmetry: 50±5%; AT Fundamental; Normal Appearance; RoHS Compliant; Freq.: 12.800000 MHz.

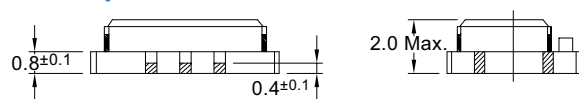
* Not all combinations of options are available.

OUTLINE DRAWING

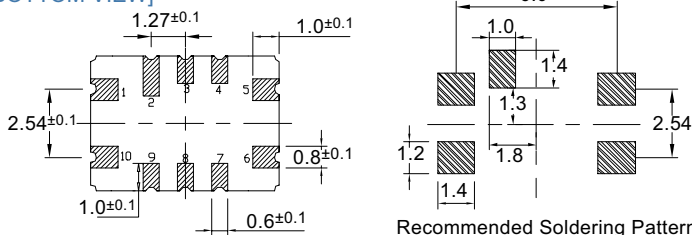
[TOP VIEW]



[SIDE VIEW]



[BOTTOM VIEW]



Recommended Soldering Pattern

Pad	Function
1	VCON : VC-TCXO NC : TCXO
2	NC
3	NC
4	NC
5	GND
6	CMOS/ Clipped Sinewave Output
7	NC
8	NC
9	Tri-State Control*
10	V _{DD}

VC-TCXO / TCXO

**ELECTRICAL SPECIFICATION**

Parameter	Min.		Max.		Unit
	5.0	3.3	5.0	3.3	
Supply Voltage Variation(V_{DD}) 5%	4.75	3.13	5.25	3.47	V
Frequency Range	10		26		MHz
Standard Frequency (for CMOS)	12.800				
Standard Frequency (for Clipped sine)	10.00, 12.80, 19.20, 19.44, 25.60				
Operating Temp. Range	Refer to Ordering Information				°C
Frequency Stability (Overall)	±4.6				ppm
Frequency Stability					ppm
Vs Temperature Range (@-20°C ~ +70°C)	-		±0.28		
Vs Temperature Range (@-40°C ~ +85°C)	-		±0.37		
Supply Current (CMOS output)	-		6		mA
Supply Current (Clipped Sine-wave output)	-		3.5		
Output Level (CMOS)					V
Output High (Logic "1")	90% V _{DD}		-		
Output Low (Logic "0")	-		10% V _{DD}		
Duty	45%		55%		%
Output Level (Clipped Sine Wave)	0.8		-		V _{p-p}
Vc Input Impedance	100		-		KΩ
Phase Noise @12.8MHz					dBc/Hz
100Hz			-120		
1KHz			-140		
10KHz			-148		
Start Time	-		2		mSec
Tri-state					V
Disable	-		(V _{DD})30%		
Enable	(V _{DD})70%		-		
Storage Temp. Range	-55		125		°C

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.

