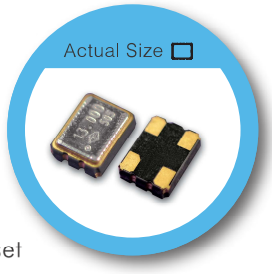
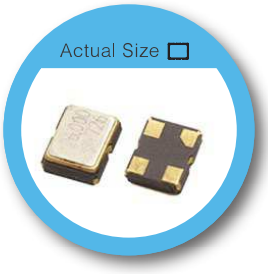
TX-J/TY-J Type
3.2 x 2.5 / 2.5 X 2.0 mm SMD CMOS Temperature Compensated Crystal Oscillator



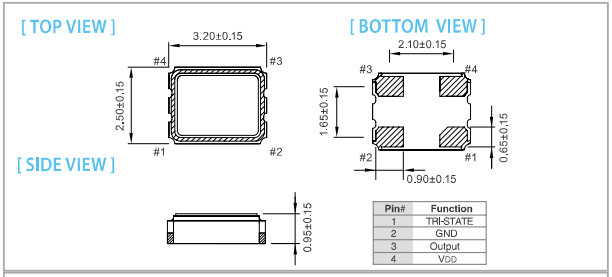


FEATURE
- Tolerance: ±2 ppm accuracy @25°C, ±2.5ppm over -40°C to +85°C-
- LVCMOS Output Logic
- Tight symmetry (45 to 55%) available.
- Operation voltage: 1.8V, 2.5V, 3.3V.
- Tri-state enable/disable.
- Femto second phase jitter and -145dBc/Hz at 10kHz offset

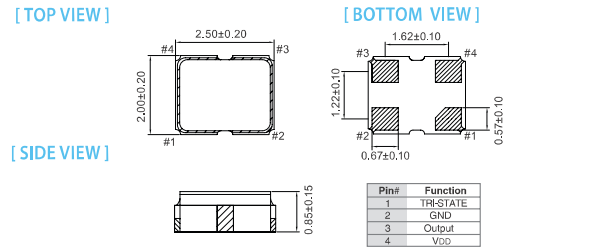
TYPICAL APPLICATION
- Wireless Connectivity
- Smart grid

RoHS Compliant

DIMENSION (mm)

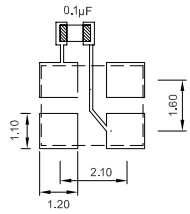


Pin#	Function
1	TRI-STATE
2	GND
3	Output
4	VDD

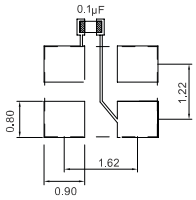


Pin#	Function
1	TRI-STATE
2	GND
3	Output
4	VDD

SOLDER PAD LAYOUT (mm)



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1μF as close to the part as possible between Vdd and GND pads.



To ensure optimal oscillator performance, place a by-pass capacitor of 0.1μF as close to the part as possible between Vdd and GND pads.

ELECTRICAL SPECIFICATION

Parameter	3.3 V		2.5 V		1.8 V		Unit
	Min.	Max.	Min.	Max.	Min.	Max.	
Supply Voltage Variation (VDD) ±5%	3.135	3.465	2.375	2.625	1.71	1.89	V
Frequency Range	9.5	60	9.5	60	9.5	60	MHz
Supply Current 9.5≦ Fo≦60 MHz	--	10	--	7	--	5	mA
Duty Cycle	45	55	45	55	45	55	%
Output Level (CMOS) Output Hight(Logic"1")	2.97		2.25		1.62		V
Output Low(Logic"0")		0.33		0.25		0.18	
Transition Time : Rise/Fall Time+		8		8		8	nSec
Start Time		5		5		5	mSec
Tri-State(Input to Pin 1) Enable(High voltage or floating)	2.31		1.75		1.26		V
Disable(Low voltage or GND)		0.99		0.75		0.54	
RMS Phase Jitter (integrated 12kHz ~ 20MHz)		1		1		1	pSec
Phase Noise @ 26MHz 10Hz		-80		-80		-80	dBc/Hz
100Hz		-110		-110		-110	
1kHz		-130		-130		-130	
10kHz		-145		-145		-145	
Aging (@25°C 1st year)		±1		±1		±1	ppm
Storage Temp. Range	-55	125	-55	125	-55	125	°C

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position
+Transition times are measured between 10% and 90% of VDD, with an output load of 15pF

FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C) \ ppm	±2.5	±5.0	±10.0
-40 ~ +85	○	○	○
-40 ~ +90	△	○	○
-40 ~ +105	×	△	○

* ○: Available △:Conditional X: Not available

Note: not all combination of options are available. Other specifications may be available upon request.

Model Numbering Guide – VCTCXO / TCXO

Available options

Type	package (mm)	Supply Voltage (V)	Pulling Range (ppm)	Freq. Stability (ppm)	Temp. Range(°C)	Output Logic And Symmetry	Oscillator Mode	Appearance	Lead Free	Dash	Freq. (MHz)
T: TCXO	Z: 2.0x1.6 Y: 2.5x2.0 X: 3.2x2.5 S: 7.0x5.0 (10Pads) A: 7.0x5.0 (4Pads) K: 14.3x8.4 F: 20.4x12.8 (Dip)	C: 5.0 E: 2.8/3.0/3.3 J: 2.5 K:1.8 (TX / TY)	A: ± 5 B: ± 8 C: ±10 T: TCXO Vcon range: 0.5V to 2.5V	A: ±0.5 B: ±1.0 P: ±1.5 C: ±2.0 D: ±2.5	B: 0~+55 I : -10~+60 J: -10~+70 C: -20~+70 H: -30~+75 D: -30~+85 L : -40~+85	A: TTL 15pF / 50±5% J: CMOS 15pF / 50±5% K:CMOS 15pF / 50±10% S: Clipped sine wave 10KΩ//10pF	A:AT Fundamental Not selectable by customer	N: Normal	F: RoHs Compliant	–	XX.XXXXXX
T: TCXO (High Precision /Stratum 3)	W: 5.0x3.2 S: 7.0x5.0 (10Pads) T: 7.0x5.0 (4Pads)	C: 5.0 E: 3.3		Q: ±0.05 M: ±0.1 J : ±0.14 R: ±0.2 K: ±0.28 L: ±0.37 T: ±4.6 (Including 20 Years Aging)							

T X E C D D S A N F – 26.000000

*Not all combinations of options are available.

Example: TXECDDSANF-26.000000

Type	VCTCXO
Package	3.2 x 2.5 mm
Supply Voltage(V)	3.0 V
Pulling Range	±10 ppm
Freq. Stability	±2.5 ppm
Temp Range	-30~+85 °C
Output	Clipped sine wave
Oscillator Mode	AT Fundamental
Appearance	Normal Appearance
Lead Free	RoHs Compliant
Frequency	26.000000 MHz