

Type TY smd VCTCXO
(10 ~ 52)MHz, (1.8 ~ 3.3)Vd.c. supply
(2.5 x 2.0)mm, height 0.9mm
tolerance from ±0.5ppm

A sub-miniature, low profile, smd voltage controlled TCXO manufactured over the frequency range of 10MHz to 52MHz, tolerance from ±0.5ppm, low ageing and low power consumption.

A standard package for new designs and volume applications combining small size and tight tolerance over an extended temperature range.

Supplied on tape and reel; 3000 pieces per reel, RoHS compliant.

Frequency stability -vs- temperature:

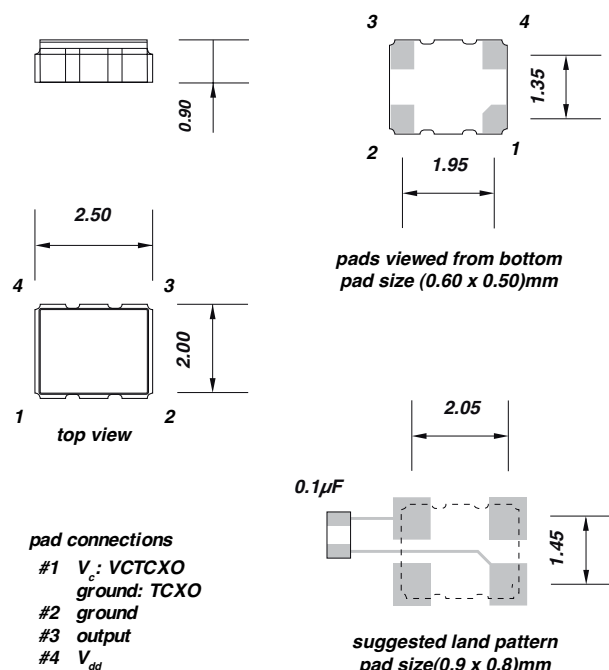
TEMP. RANGE	TOLERANCE				
(-20 +70)°C	±0.5ppm	±1.0ppm	±1.5ppm	±2.0ppm	±2.5ppm
(-30 +85)°C		±1.0ppm	±1.5ppm	±2.0ppm	±2.5ppm
(-40 +85)°C			±1.5ppm	±2.0ppm	±2.5ppm

Electrical specification:

	(2.8 ~ 3.3)Vd.c.		2.5Vd.c.		1.8Vd.c.		
	min.	max.	min.	max.	min.	max.	
supply voltage ±5%	2.66	3.465	2.375	2.625	1.71	1.89	Vd.c.
frequency range	(10 ~ 52)MHz						MHz
standard frequencies	16.367667, 16.368, 16.369, 19.20, 20.0, 26.0, 40.0						MHz
standard frequency tolerance*	±2.0						ppm
frequency stability vs supply ±5%	-	±0.2	-	±0.2	-	±0.2	ppm
frequency stability vs load ±10%	-	±0.2	-	±0.2	-	±0.2	ppm
frequency stability vs ageing	-	±1.0	-	±1.0	-	±1.0	ppm per year
supply current: (13 ~ 26)MHz	-	2.0	-	2.0	-	2.0	mA
supply current: (26 ~ 52)MHz	-	2.5	-	2.5	-	2.5	mA
output level clipped sine wave	0.8	-	0.8	-	0.8	-	Vp-p
load	10KΩ//10pF		10KΩ//10pF		10KΩ//10pF		
V _c voltage control range (VCTCXO)	0.4	2.5	0.4	2.5	0.3	1.5	V
pulling range	±5	-	±5	-	±5	-	ppm
V _c input impedance	500		500		500		KΩ
phase noise @19.2MHz +100Hz	-115		-115		-115		dBc/Hz
phase noise @19.2MHz +1kHz	-135		-135		-135		dBc/Hz
phase noise @19.2MHz +10kHz	-148		-148		-148		dBc/Hz
start up time	-	2	-	2	-	2	milli sec
storage temperature range	(-55 +125)°C						°C

* frequency at +25°C one hour after reflow

Dimensions(mm)



- pad connections**
- #1 V_c: VCTCXO
 - ground: TCXO
 - #2 ground
 - #3 output
 - #4 V_{dd}

Ordering information

EXAMPLE	<i>type TY smd VCTCXO, 19.20MHz, $\pm 2.0\text{ppm}(-20 +70)^{\circ}\text{C}$, $+(2.8 \sim 3.3)\text{Vd.c.}$ supply, output clipped sine wave, $10\text{K}\Omega/10\text{pF}$</i>
TFC PART NUMBER	TY 19.20M E C C
TY	<i>type: TY = VCTCXO type TY</i>
19.20M	<i>frequency: 19.20MHz, frequency range (10 ~ 52)MHz</i>
E	<i>supply voltage: E = $+(2.8 \sim 3.3)\text{Vd.c.}$,</i>
C	<i>frequency stability: C = $\pm 2\text{ppm}$</i>
C	<i>temperature range: C = $(-20 +70)^{\circ}\text{C}$</i>
OPTIONS	
supply voltage	<i>K: $+1.8\text{Vd.c.}$, J: $+2.5\text{Vd.c.}$, E: $+(2.8 \sim 3.3)\text{Vd.c.}$</i>
frequency stability	<i>A: $\pm 0.5\text{ppm}$, B: $\pm 1.0\text{ppm}$, P: $\pm 1.5\text{ppm}$, C: $\pm 2.0\text{ppm}$, D: $\pm 2.5\text{ppm}$</i>
temperature range	<i>C: $(-20 +70)^{\circ}$, D: $(-30 +85)^{\circ}\text{C}$, L: $(-40 +85)^{\circ}\text{C}$</i>