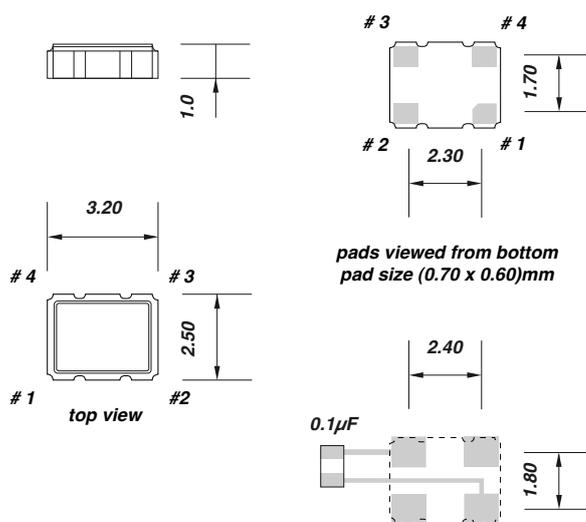


**Type TX smd TCXO**  
**(10 ~ 52)MHz, (1.8 ~ 3.0)Vd.c. supply**  
**(3.2 x 2.5)mm, height 1.0mm**  
**tolerance from ±0.5ppm**

A 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.

**Dimensions(mm)**


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

**suggested land pattern**  
pad size (1.0 x 0.9)mm

**connect 0.1µF capacitor**  
between  $V_{DD}$  and ground

**Frequency stability -vs- temperature:**

TEMP. RANGE	TOLERANCE				
(0 +55)°C	±0.5ppm	±1.0ppm	±1.5ppm	±2.0ppm	±2.5ppm
(-10 +60)°C	±0.5ppm	±1.0ppm	±1.5ppm	±2.0ppm	±2.5ppm
(-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:**

	3.0Vd.c.		2.5Vd.c.		1.8Vd.c.		
	min.	max.	min.	max.	min.	max.	
supply voltage ±5%	2.85	3.15	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	±0.2	ppm
frequency stability vs load ±10%	-	±0.2	-	±0.2	±0.2	±0.2	ppm
frequency stability vs ageing		±1.0	-	±1.0		±1.0	ppm per year
supply current: (10 ~ 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	0.5	2.5	0.5	2.5	0.2	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

**Ordering information**

<b>EXAMPLE</b>	<i>type TX smd TCXO, +1.8Vd.c., 19.20MHz, ±2.0ppm(-20 +70)°C</i>
<b>TFC PART NUMBER</b>	<b>TX 19.20M K C C</b>
<b>TX</b>	<i>type: TX = TCXO type TX</i>
<b>19.20M</b>	<i>frequency: 19.20MHz, frequency range (10 ~ 52)MHz</i>
<b>K</b>	<i>supply voltage: K = +1.8Vd.c.</i>
<b>C</b>	<i>frequency stability: C = ±2ppm</i>
<b>C</b>	<i>temperature range: C = (-20 +70)°C</i>
<b>OPTIONS</b>	
<b>supply voltage</b>	<i>K: +1.8Vd.c., J: (+2.4 ~ +2.7)Vd.c., E: (+2.8 ~ +3.3)Vd.c.</i>
<b>frequency stability</b>	<i>A: ±0.5ppm, B: ±1.0ppm, P: ±1.5ppm, C: ±2.0ppm, D: ±2.5ppm</i>
<b>temperature range</b>	<i>B: (0 +55)°C, I: (-10 +60)°C, C: (-20 +70)°, D: (-30 +85)°C, L: (-40 +85)°C</i>