

The sub miniature ECS-TXO-2520 is a miniature SMD HCMOS TCXO. The 2.5 x 2.0 x 0.9 mm ceramic package is ideal for wireless and IOT application where stability is critical.



- Low Profile
- 2.5 x 2.0 mm Footprint
- Extended Temp Range
- RoHS Compliant

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-TXO-2520			UNITS
		MIN	TYP	MAX	
Frequency Range		3.200		55.000	MHz
Frequency Stability	Tolerance at +25°C			± 2.0	ppm
	Vs. Temp (-40 ~ +85°C)			± 2.5	ppm
	Voltage Change Vdd ±5%			±0.2	ppm
	Load Change (±10%)			±0.2	ppm
Aging	Per year @ +25°C			±1.0	ppm
Power Supply	Vdd ±10%	+2.5, +2.8, +3.3			V DC
Standby Current				10	µA
Output	HCMOS		15		pF
Output voltage Level	VOL:10%Vdd max./VOH:90%Vdd min.V DC				
Rise & Fall time	10%Vdd – 90%Vdd			5	ns
Duty Cycle	@ ½ Vdd			45/55	%
Phase Noise	@ 10 KHz offset		-145		dBc/Hz

DIMENSIONS (mm)

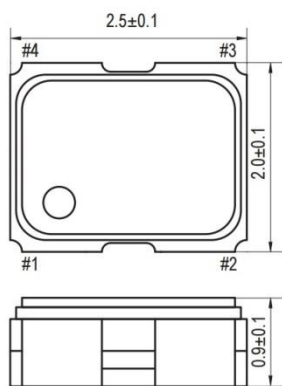
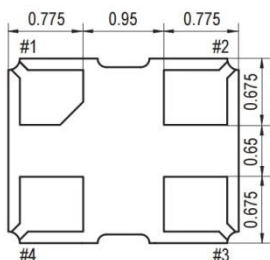


Figure 1) Top, Side, and Bottom views

CURRENT CONSUMPTION

mA Max

FREQ.	4 ~ 10 MHz	~ 20 MHz	~ 30 MHz	~ 40 MHz	~ 55 MHz
+2.5V	3.1	3.7	4.2	4.6	5.5
+2.8V	3.4	4.1	4.7	5.2	6.0
+3.3V	4.0	4.8	5.5	6.0	7.0



PAD CONNECTIONS	
1	Tri-state
2	Gnd
3	Output
4	Vdd

Tri State Function	
Pin 1	Output
High or NC	Active
Low	High Impedance

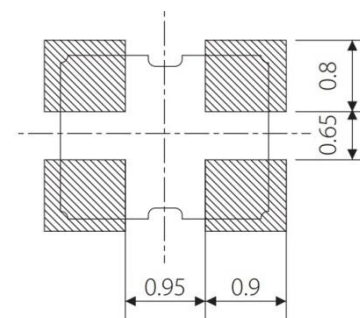


Figure 2) Suggested Land Pattern

PART NUMBERING GUIDE: Example ECS-TXO-2520-33-160-AN-TR

ECS - SERIES	Voltage	FREQUENCY ABBREVIATION	STABILITY	TEMP RANGE	PACKAGING
TXO-2525 2.5 x 2.0 mm TCXO	25 = +2.5V 28 = +2.8V 33 = +3.3V	160 = 16.000 MHz See Developed Frequencies Pg.2	* A = ±2.5 ppm B = ± 1.5 ppm C = ± 1.0 ppm	L = -10 ~ +70°C M = -20 ~ +70°C * N = -40 ~ +85°C	TR = Tape & Reel 1K/Reel

* Standard specification, contact ECS for custom Options

FREQUENCY ABBREVIATIONS

FREQUENCY MHz	CODE
5.000	050
10.000	100
12.000	120
16.000	160
20.000	200
24.000	240
25.000	250
32.000	320
40.000	400
44.000	440

SOLDER PROFILE
Peak solder Temp +260°C Max 10 sec Max.
2 Cycles Max.
MSL 1, Lead Finish Au

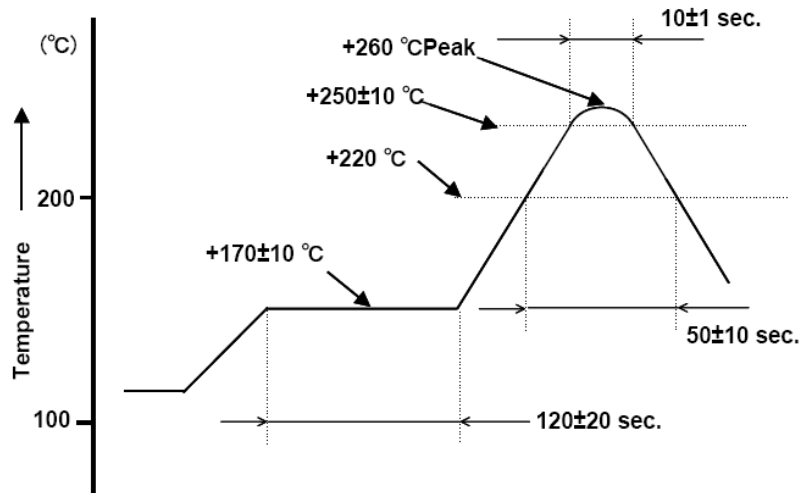
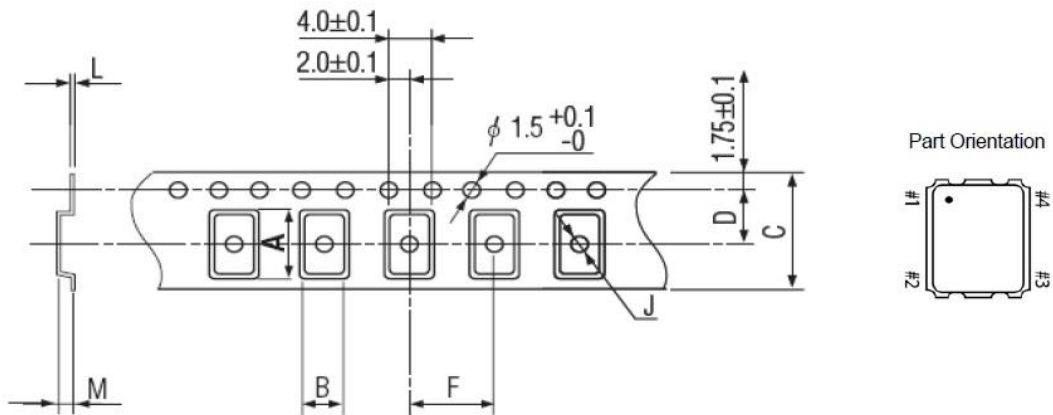


Figure 1) Suggested Reflow Profile

POCKET TAPE DIMENSIONS (mm)



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
2.8	2.3	8.0	3.5	4.0	1.0	0.25	1.1	180	1000pcs