ECS-TXO-2016

SMD HCMOS TCXO

The sub miniature ECS-TXO-2016 is a miniatue SMD CMOS TCXO. The 2.0 x 1.6 x 0.8 mm ceramic package is ideal for LoRa WAN, and wireless IoT applications where stability is critical.

Request a Sample

ECX-2016 SMD HCMOS TCXO



- Low Profile
- 2.0 x 1.6 mm Footprint
- Extended Temp Range
- RoHS Compliant

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

PARAMETERS	CONDITIONS	ECS-TXO-2016			UNITS
		MIN	TYP	MAX	
Frequency Range		9.500		60.000	MHz
Frequency Stability	Tolerance at +25°C			± 2.0	ppm
	Vs. Temp (-30 ~ +85°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
Supply Voltage (Vdd)	Specify in P/N	+1.8, +2.5, +2.8, +3.3 ±10%			V DC
Standby Current				10	µA
Output	CMOS		15		pF
Output voltage Level	V_{OL}:10%V_{dd} max./V_{OH}:90%V_{dd} min.V DC				
Rise & Fall time	10%V_{dd} – 90%V_{dd}			5	ns
Duty Cycle	@ ½ V_{dd}			45/55	%
Phase Noise	@ 10 KHz offset		-145		dBc/Hz

CURRENT CONSUMPTION , mA Max.

FREQ.	9.5~ 10 MHz	10.1~ 20 MHz	20.1~ 30 MHz	30.1~ 40 MHz	40.1 ~60 MHz
+1.8V & +2.5V	3.1	3.7	4.2	4.6	5.5
+2.8V & +3.3V	4.0	4.8	5.5	6.0	7.0

DIMENSIONS (mm)

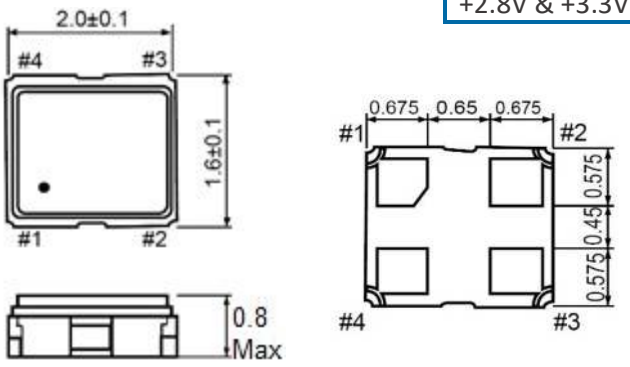


Figure 1) *Top, Side, and Bottom views*

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

Tri State Function	
Pin 1	Output
High or NC	Active
Low	Disable Hi-Z

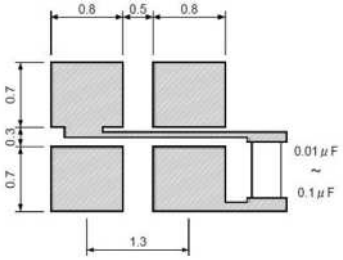


Figure 2) *Suggested Land Pattern*

PART NUMBERING GUIDE: Example ECS-TXO-2016-33-160-TR

ECS - SERIES	Voltage	FREQUENCY ABBREVIATION	PACKAGING
TXO-2016 2.0 x 1.60 mm TCXO	18 = +1.8V 25 = +2.5V 28= +2.8V 33 = +3.3V	160 = 16.000 MHz See Developed Frequencies Pg.2	TR = Tape & Reel 1K/Reel

* Standard specification, contact ECS for custom Options

Rev.2019

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FREQUENCY ABBREVIATIONS

FREQUENCY MHz	CODE
10.000	100
12.000	120
16.000	160
20.000	200
25.000	250
32.000	320
40.000	400
50.000	500

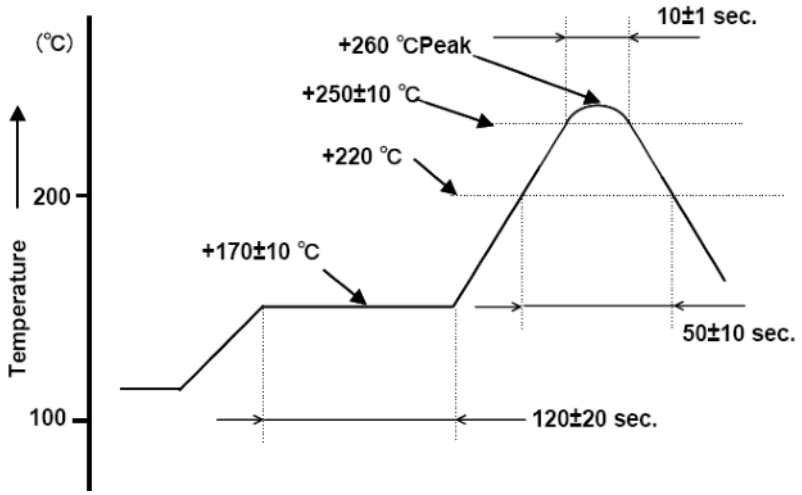
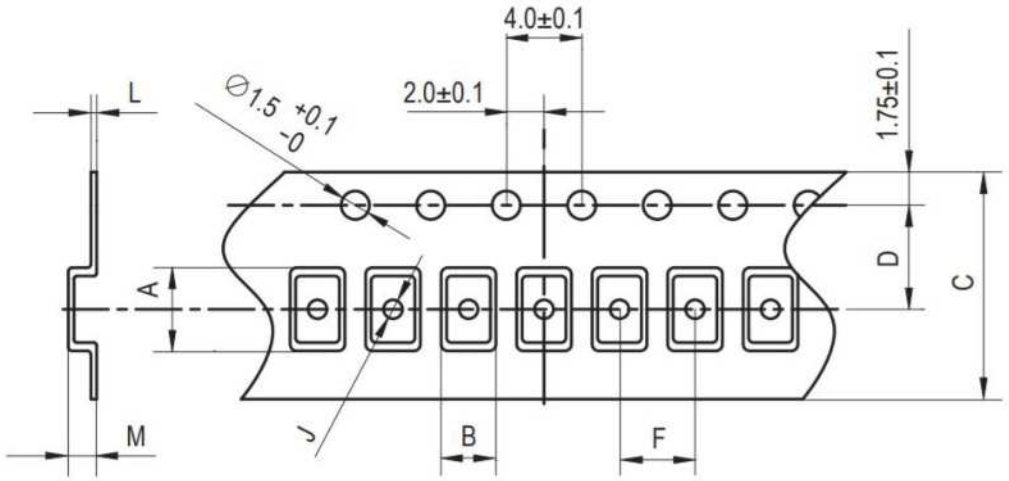


Figure 1) *Suggested Reflow Profile*

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

POCKET TAPE DIMENSIONS (mm)



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
2.2	1.8	8.0	3.5	4.0	1.0	0.25	1.0	180	1000pcs