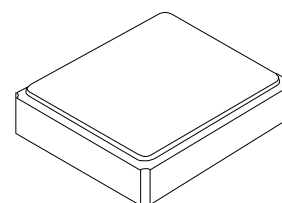


- **Temperature Compensated Crystal Oscillator**
- **Ultra-miniature 2.5 x 2.0 x 0.8 mm Package**
- **Excellent Frequency Stability**
- **Low Phase Noise**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

XTC7011

22.57920 MHz
TCXO



SM2520-4

Electrical Characteristics

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Nominal Frequency	F _O			22.57920		MHz
Frequency Tolerance after Reflow			±2 ppm maximum @ 25 ±3 °C			
Storage Temperature Range in Tape and Reel			-40		+85	°C
Operating Temperature Range			-30		+85	°C
Power Supply Voltage	V _{DD}		2.66	2.80	2.94	V
Output Voltage with 10 pF 10 KΩ Load			0.8			V _{P-P}
Output Waveform			Clipped Sinewave			
Power Supply Current	I _{DD}				1.5	mA
Frequency Stability versus:						
Temperature, -30 to 85 °C					±0.5	ppm
Load Variation, 10 pF 10 KΩ ±10%					±0.2	ppm
Supply Voltage, 2.80 V ±5%					±0.2	ppm
Start Up Time, 90% of Final RF level in V _{P-P}					2.0	ms
Harmonics					-5.0	dBc
SSB Phase Noise @ 1 kHz Carrier Offset					-130	dBc/Hz
Aging @ 25 °C					±1.0	ppm/yr
Standard Shipping Quantity on 180 mm (7") Reel				1000		units
Lid Symbolization, Y = year, W = week			4M, <u>YW</u>			

Pin Connections

Connection	Terminals
Ground	1
Ground	2
TCXO Output	3
V _{DD}	4



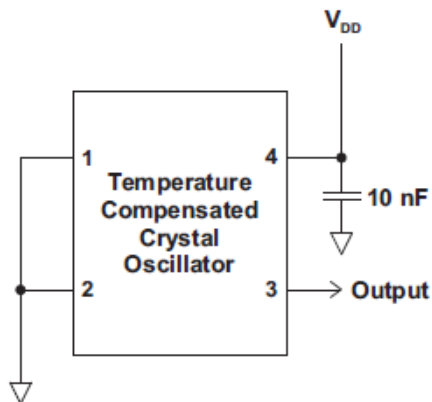
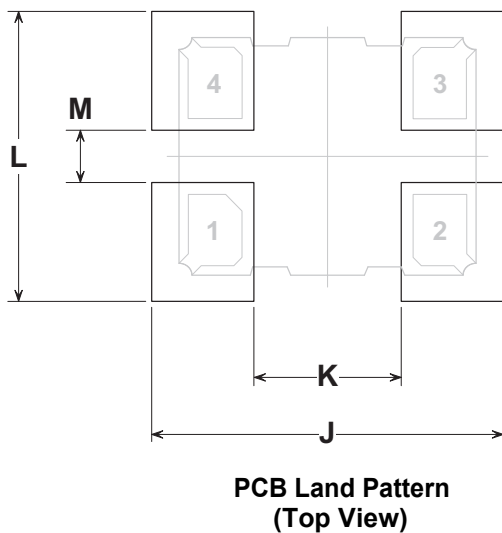
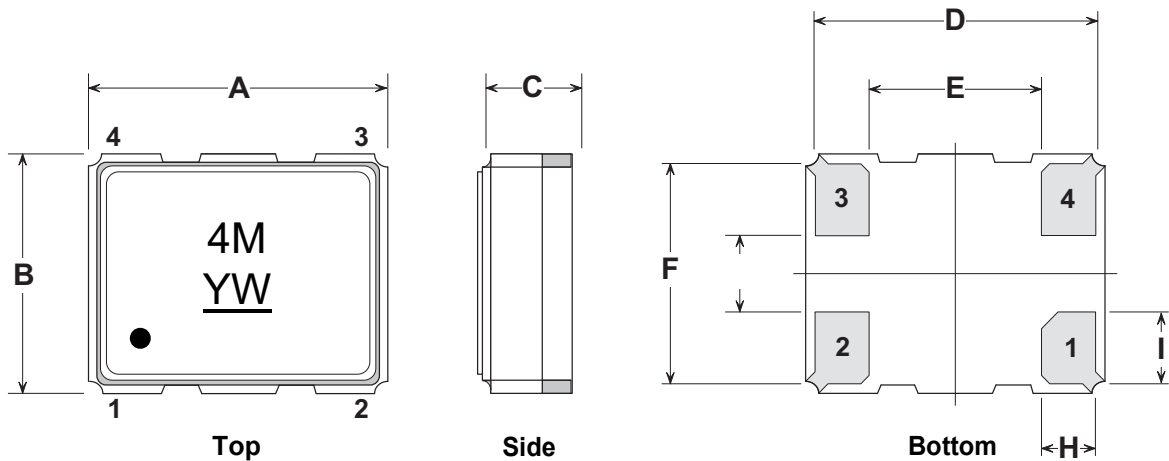
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

4 Terminal Surface Mount Seam Welded Case

2.5 x 2.0 mm Nominal Footprint



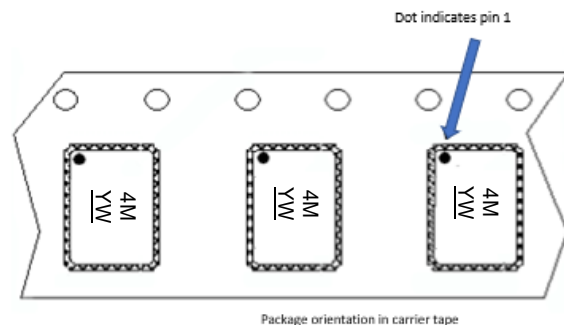
TCXO Application Circuit

Case and PCB Land Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.30	2.50	2.70	0.091	0.098	0.106
B	1.80	2.00	2.20	0.071	0.079	0.087
C	-	-	0.80	-	-	0.031
D	-	2.39	-	-	0.094	-
E	-	1.45	-	-	0.057	-
F	-	1.89	-	-	0.074	-
G	-	0.65	-	-	0.026	-
H	-	0.47	-	-	0.019	-
I	-	0.62	-	-	0.024	-
J	-	2.97	-	-	0.117	-
K	-	1.25	-	-	0.049	-
L	-	2.45	-	-	0.096	-
M	-	0.45	-	-	0.018	-

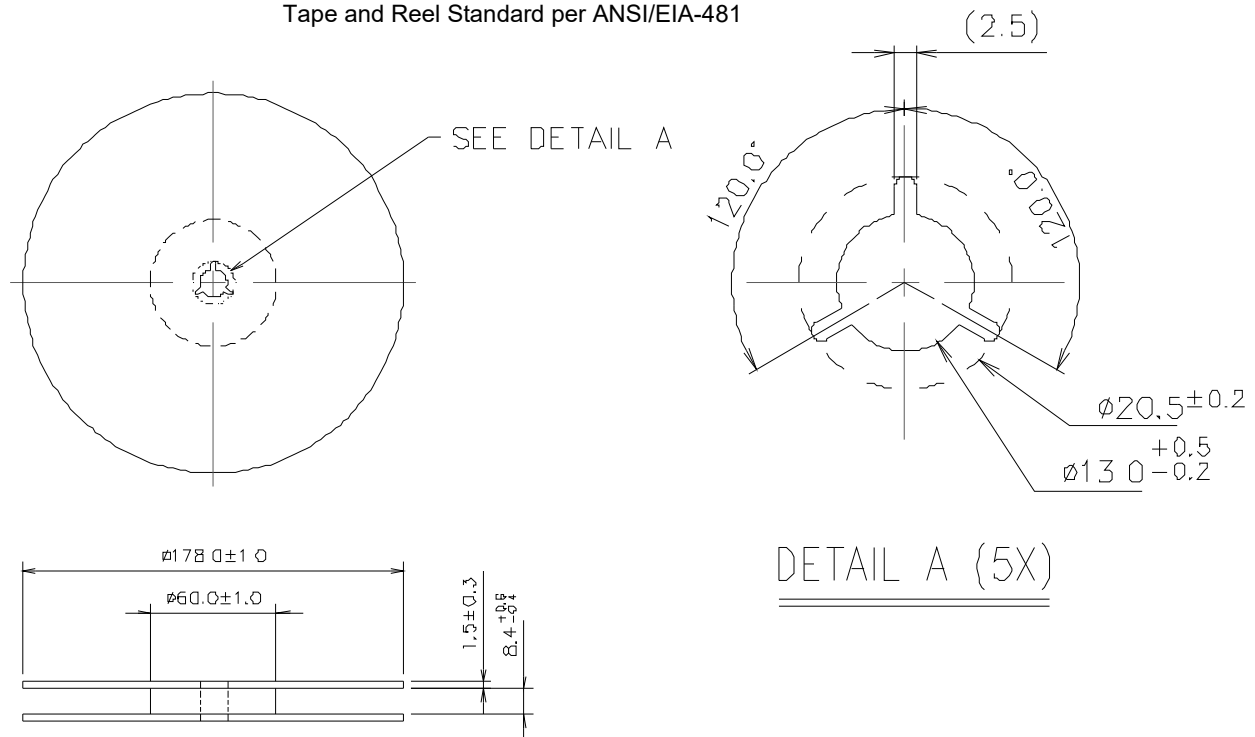
Case Materials

Materials	
Solder Pad Plating	0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel
Lid Plating	2.0 to 3.0 μ m Nickel
Body	Al ₂ O ₃ Ceramic

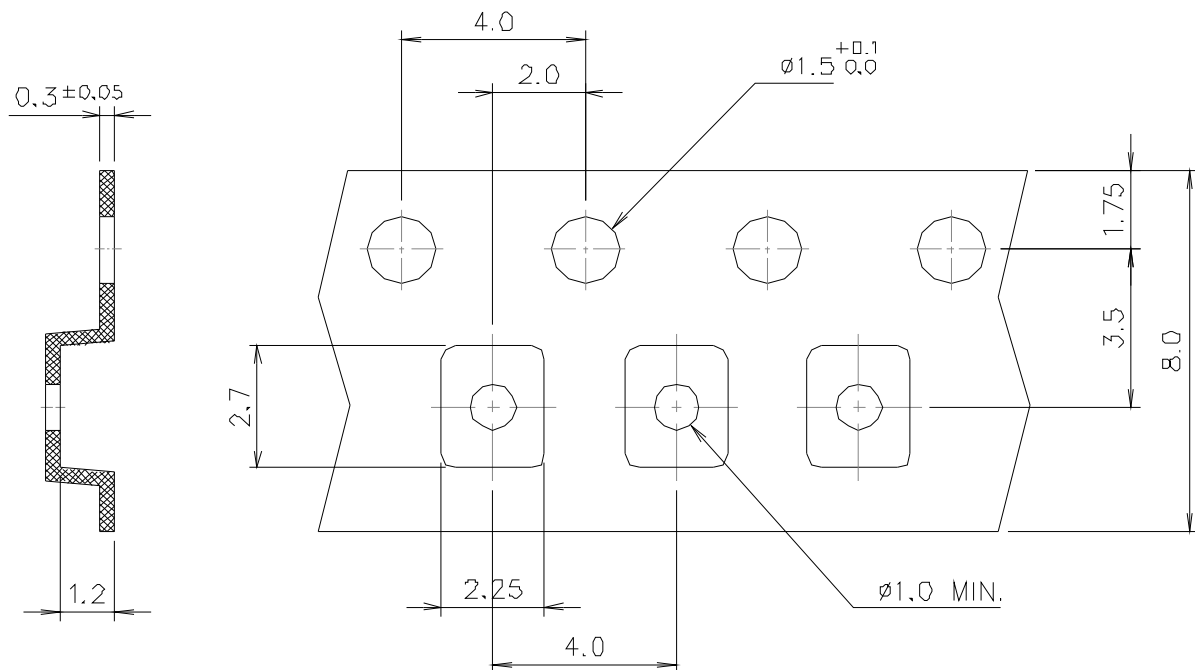


Reel Dimensions

Tape and Reel Standard per ANSI/EIA-481



Tape Dimensions



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

