

**P/N: WTL3C20597**  
**3.2\*2.5mm 32.000000MHz TCXO**



Customer	WTL
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# SPECIFICATION

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## ELECTRICAL SPECIFICATIONS

### FREQUENCY CHARACTERISTICS

	Parameter	Min.	Typ.	Max.	Unit	Test Condition
1-1	Nominal Frequency		32.000000		MHz	
1-2	Nominal Frequency Tolerance	-2.0		+2.0	ppm	Frequency at 25°C, 1 hour after reflow.
1-3	Frequency stability over temperature	-2.0		+2.0	ppm	Referenced to the the frequency at 25°C, over -40 oC to +85 oC.
1-4	Temperature range	-40		+85	°C	The operating temperature range over which the frequency stability is measured
1-5	Supply voltage stability	-0.3		+0.3	ppm	Supply voltage varied $\pm 7.143\%$ at 25 °C
1-6	Load sensitivity	-0.2		+0.2	ppm	$\pm 10\%$ load change
1-7	Aging	-1.0		+1.0	ppm	first year at 25 °C

### POWER SUPPLY

	Parameter	Min.	Typ.	Max.	Unit	Test Condition
2-1	Supply voltage	2.97	3.3	3.63	v	
2-2	Current			2.0	mA	At maximum supply voltage

### OSCILLATOR OUTPUT

	Parameter	Min.	Typ.	Max.	Unit	Test Condition
3-1	Output waveform	Clipped sine wave				DC Coupled clipped sine wave
3-2	Output voltage level	0.8		2.0	Vp- p	
3-3	Output load	10Kohm//10pF				
3-4	Start time			2.0	ms	

### PHASE NOISE

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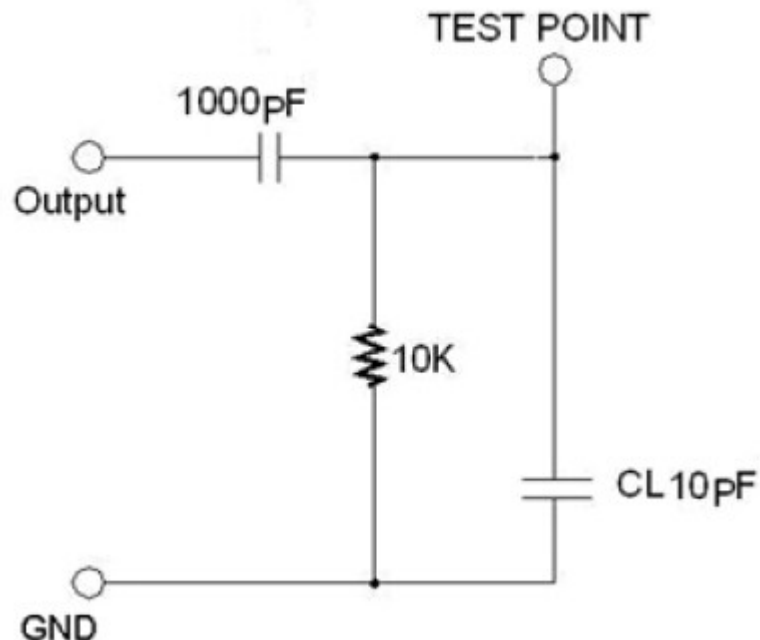


	Parameter	Min.	Typ.	Max.	Unit	Test Condition
4-1	10Hz offset		-70		dBc/Hz	
4-2	100Hz offset		-105		dBc/Hz	
4-3	1KHz offset		-125		dBc/Hz	
4-4	10KHz offset		-140		dBc/Hz	

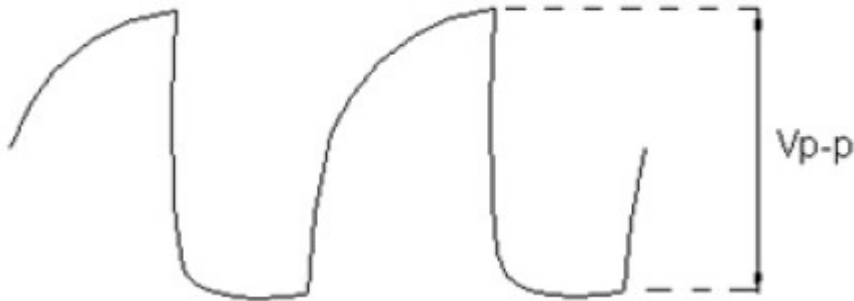
**ENVIRONMENTAL**

	Parameter	Reference Std.	Test Condition
5-1	Vibration Test	MIL-STD-883 2007 Condition A JESD22-B103 Condition 1	10~2000Hz, 1.52mm, 20G, each axis for 4 hrs
5-2	Thermal Shock	MIL-STD-883 1010 Condition B JESD22-A104 Condition B	-55°C, 125°C; soak time is 10 mins, with total 200 cycles
5-3	Mechanical Shock	MIL-STD-883 2002 Condition B JESD22-B104 Condition B	1500G, half-sine, 0.5ms, each axis for 3 times.
5-4	Storage temperature		-40 °C to +85 °C

**TEST CIRCUIT**

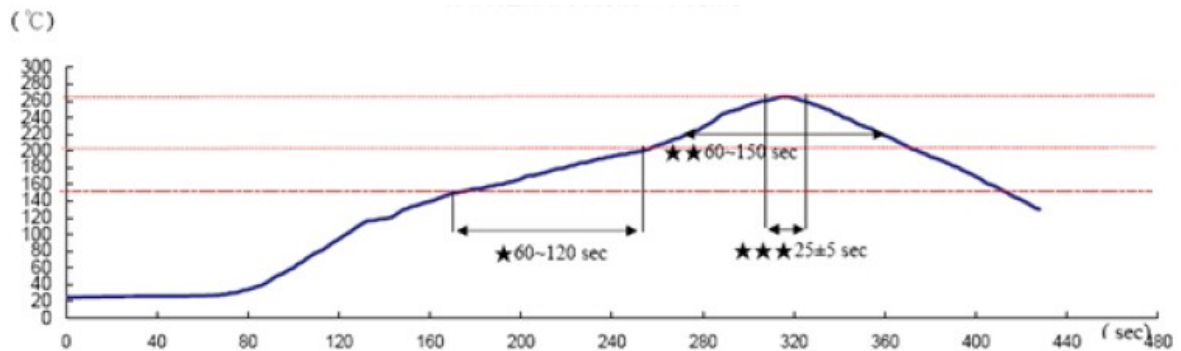


## OUTPUT WAVEFORM



## RECOMMENDED IR REFLOW PROFILE

IR REFLOW PROFILE OF CERAMIC SMD PRODUCTS FOR Pb FREE PROCESS



Reference Standard: JEDEC-STD 020

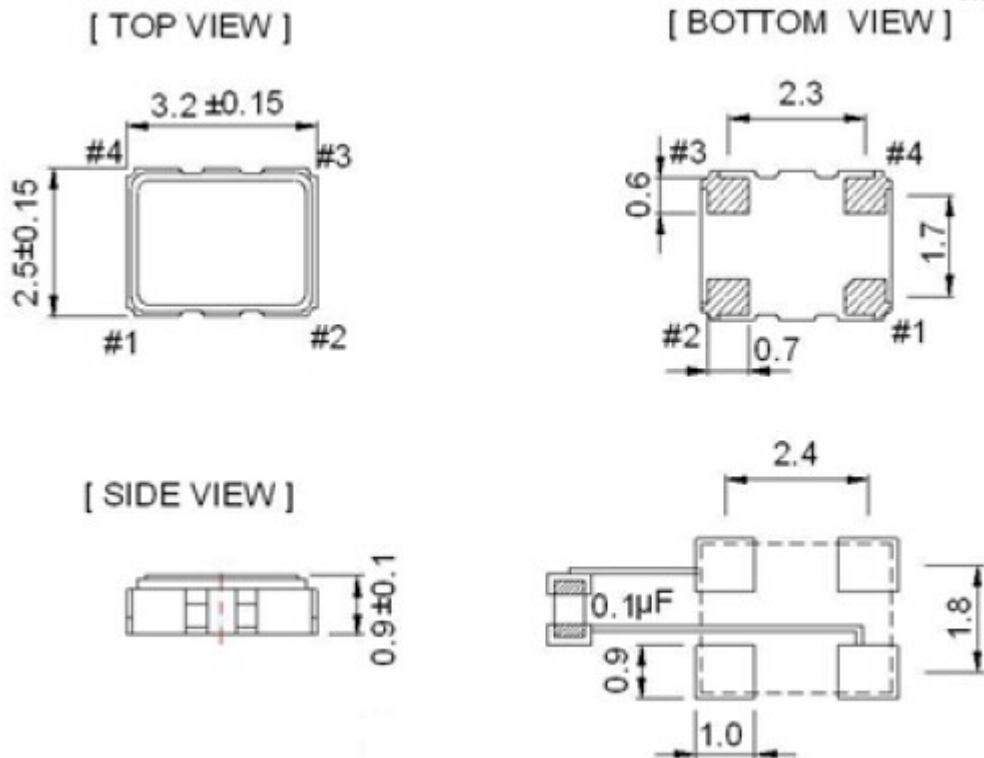
Test conditions: ★ Pre-heating : 150°C to 200°C, 60~120secs.

★★ Heating : 217°C, 60~150sec.

★★★ Peak temperature : 260±5°C, 25±5sec.

## PRODUCT DIMENSIONS

Unit:mm

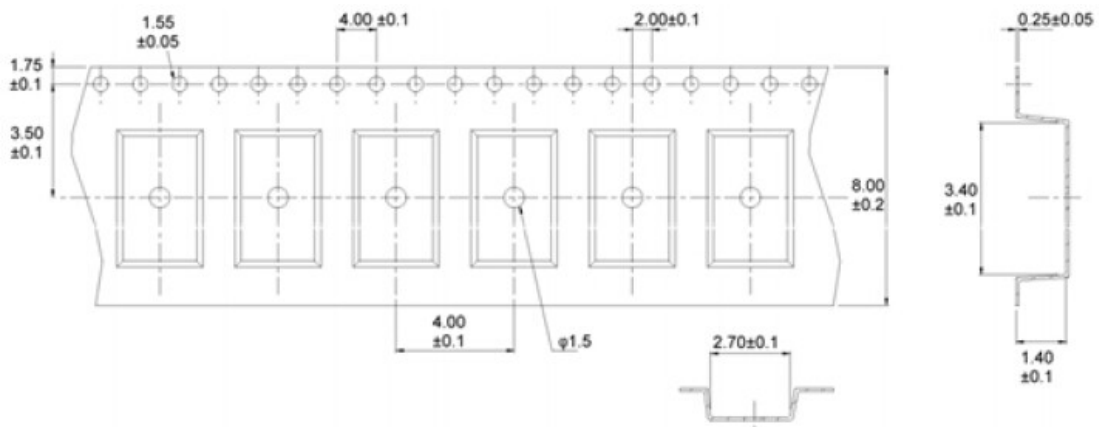


### Pin Function

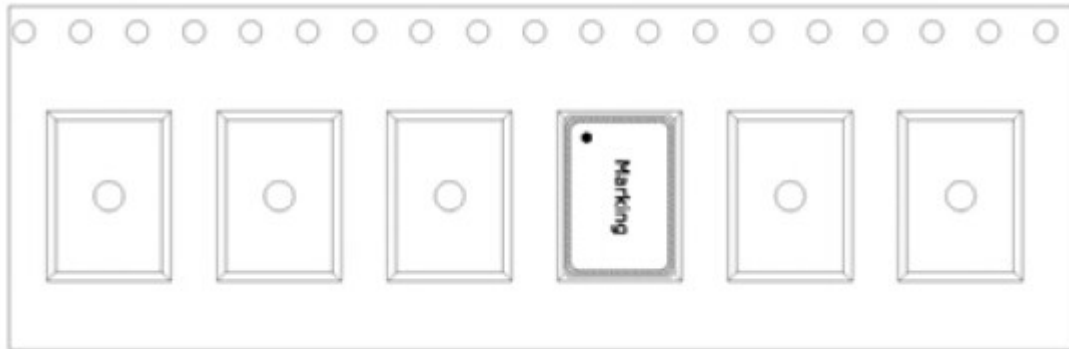
- #1 VCON
- #2 GND
- #3 Output
- #4  $V_{DD}$

## PACKAGE INFORMATION

### TAPE (CARRIER) DIMENSIONS Unit:mm



**THE DIRECTION OF PACKING**



**REEL DIMENSIONS Unit:mm**

