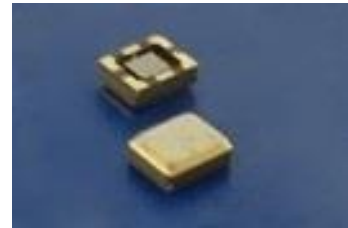




TL PRODUCT FAMILY Surface Mount TCXO 2.0 x 1.6mm

Features

- Ultra-Small Package
- Temperature Stability ± 1.5 ppm
- Operating Temperature Range $-30^{\circ}\text{C} \sim +85^{\circ}\text{C}$



❖ Specifications

Parameter		Value
FREQUENCY RANGE		10 ~ 52 MHz
SUPPLY VOLTAGE		1.8V, 3.3 V
INPUT CURRENT		2.0 mA max
FREQUENCY STABILITY	vs. TEMPERATURE	$\pm 0.5 \sim \pm 2.5$ ppm
	vs. LOAD ($\pm 10\%$)	± 0.2 ppm max
	vs. SUPPLY VOLTAGE	± 0.2 ppm max
	AGING 1 st YEAR	± 1.0 ppm max
FREQUENCY TOLERANCE at 25°C AFTER 2 REFLAWS		± 2.0 ppm max
OPERATING TEMPERATURE RANGE ¹		$-40 \sim +85^{\circ}\text{C}$
STORAGE TEMPERATURE RANGE		$-40 \sim +85^{\circ}\text{C}$
CLIPPED SINEWAVE OUTPUT VOLTAGE		0.8 V _{p-p} typ
OUTPUT LOAD		10 k Ω // 10 pF
START-UP TIME		5 ms max
PHASE NOISE at 1 kHz OFFSET		-130 dBc/Hz max

NOTE: 1. NOT ALL STABILITIES ARE AVAILABLE FOR ALL OPERATING TEMPERATURE RANGES. CONTACT FACTORY FOR AVAILABILITY.

❖ Environmental

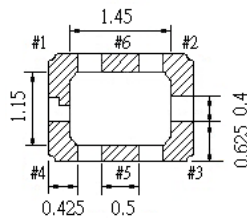
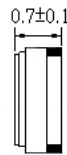
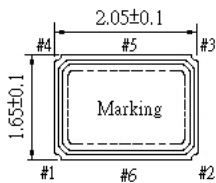
Parameter	Value
Moisture Sensitivity Level	1
RoHS	Compliant
REACH SVHC	Compliant
Halogen Free	Compliant
Termination Finish	Au
Unit Weight (grams)	0.051

RS, Professionally Approved Products, gives you professional quality parts across all products categories. Our range has been testified by engineers as giving comparable quality to that of the leading brands without paying a premium price.



TL PRODUCT FAMILY

❖ Mechanical Specification



(Bottom View)

- Pin Connections
 #1 : Gnd
 #2 : Gnd
 #3 : Output
 #4 : Vdd
 #5, #6 : No Connect

❖ Part Numbering

Product Family	-	Frequency	-	Stability	-	Temperature Range	-	Voltage	-	Output
TL		Frequency (MHz)		Stability (ppm) A = ±0.5 C = ±1.5		Temp Range (°C) D3 = -40 ~ +85 F3 = -30 ~ +85		Supply Voltage (V) 18 = 1.8V 33 = 3.3V		S = Clipped Sinewave

EXAMPLE: TL-32.000-AF3-33-S

Surface Mount TCXO 2.5 x 2.0mm, 32.000MHz, Stability ±0.5ppm over 30°C ~ +85°C, Supply Voltage 3.3V, Clipped Sinewave Output

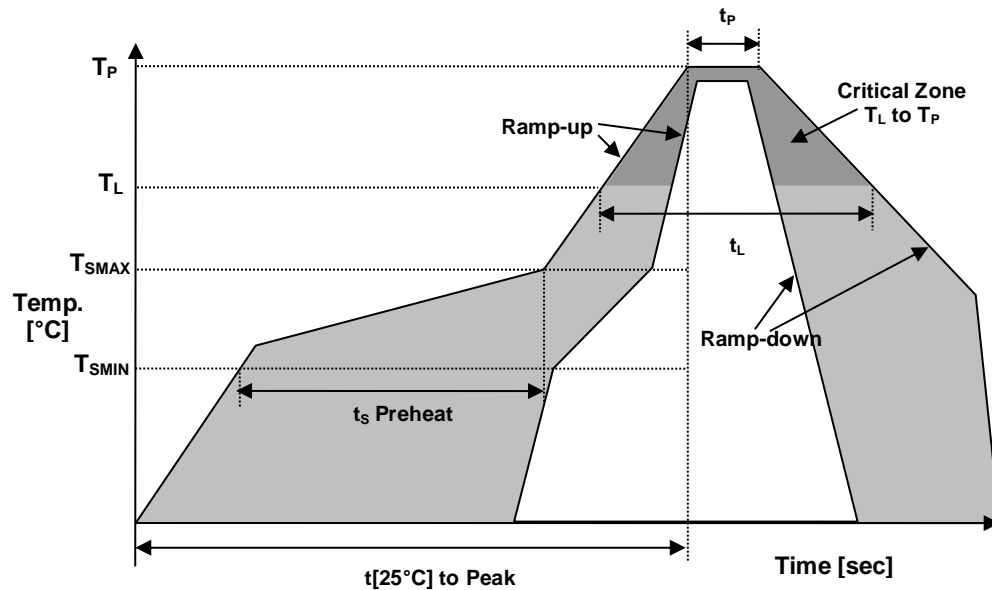
EXAMPLE: TL-10.000-CD3-18-S

Surface Mount TCXO 2.5 x 2.0mm, 10.000MHz, Stability ±1.5ppm over 40°C ~ +85°C, Supply Voltage 1.8V, Clipped Sinewave Output



TL PRODUCT FAMILY

Reflow Profile



Reflow Profile (Reference IPC/JEDEC J-STD-020)		
Temperature Min Preheat	T_{SMIN}	150°C
Temperature Max Preheat	T_{SMAX}	200°C
Time (T_{SMIN} to T_{SMAX})	t_s	60 – 180 sec.
Temperature	T_L	217°C
Peak Temperature	T_P	260°C
Ramp-Up Rate	R_{UP}	3°C / sec. max
Ramp-Down Rate	R_{DOWN}	6°C / sec. max
Time within 5°C of Peak Temperature	T_P	10 sec.
Time $t[25^\circ\text{C}]$ to Peak Temperature	$t[25^\circ\text{C}]$ to Peak	480 sec.
Time	T_L	60 – 150 sec.

March 19, 2018