

FEATURES

- TEMPERATURE STABILITY $\pm 0.5 \text{ ppm} \sim \pm 2.5 \text{ ppm}$
- OPERATING TEMPERATURE RANGE $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- VOLTAGE CONTROL AVAILABLE (RTV-124 SERIES)



SPECIFICATIONS

PARAMETER		VALUE
FREQUENCY RANGE		13 ~ 52 MHz
SUPPLY VOLTAGE		1.8 ~ 3.3 V
INPUT CURRENT		2.5 mA max
FREQUENCY STABILITY	vs. TEMPERATURE	$\pm 0.5 \sim \pm 2.5 \text{ ppm}$
	vs. LOAD ($\pm 10\%$)	$\pm 0.2 \text{ ppm max}$
	vs. SUPPLY VOLTAGE	$\pm 0.2 \text{ ppm max}$
	AGING 1 st YEAR	$\pm 1.0 \text{ ppm max}$
FREQUENCY TOLERANCE at 25°C AFTER 2 REFLAWS		$\pm 2.0 \text{ ppm max}$
OPERATING TEMPERATURE RANGE ¹		$-40 \sim +85^{\circ}\text{C}$
STORAGE TEMPERATURE RANGE		$-40 \sim +85^{\circ}\text{C}$
SINEWAVE OUTPUT		
CLIPPED SINEWAVE OUTPUT VOLTAGE		0.8 V _{P-P} typ
SINEWAVE OUTPUT LOAD		10 k Ω // 10 pF
CMOS OUTPUT		
CMOS OUTPUT LOAD		15 pF
SYMMETRY		45 ~ 55 %
START-UP TIME		5 ms max
FREQUENCY TUNING RANGE ²		$\pm 7 \sim \pm 16 \text{ ppm}$
PHASE NOISE at 10 kHz OFFSET		-145 dBc/Hz max



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

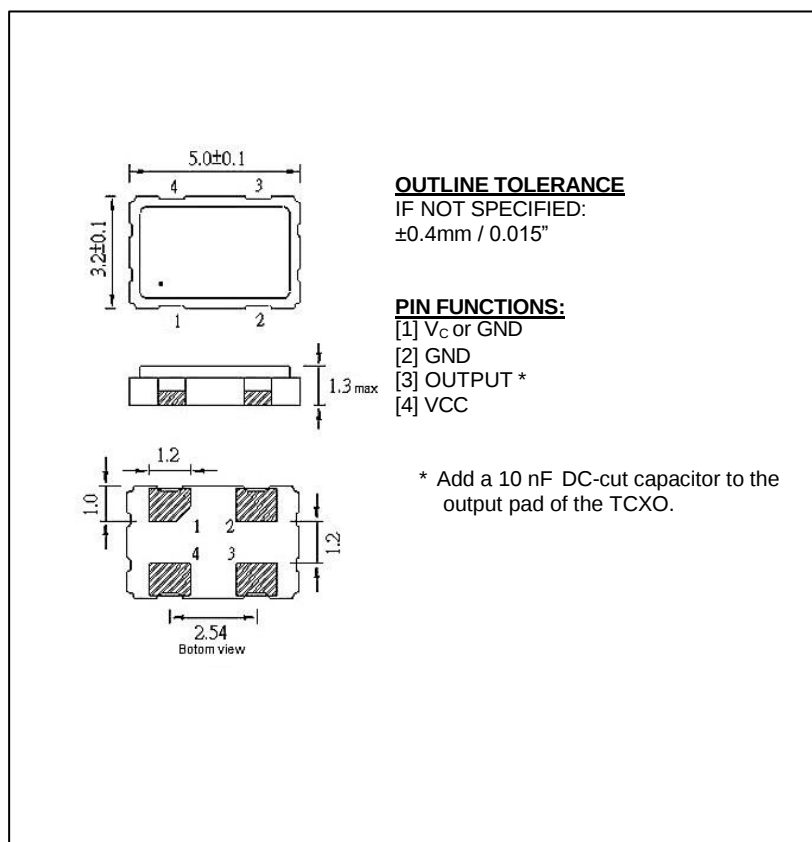
PART NUMBERING SYSTEM

TYPE	-	SERIES	STABILITY (ppm)	TEMP RANGE (°C)	VOLTAGE (V)	FREQ TUNING RANGE (ppm)	-	OUTPUT	-	FREQ (MHz)	-	TAPE & REEL
RTX (TCXO) RTV (VCTCXO)	-	124	A: ± 0.5 B: ± 1.0 C: ± 1.5 D: ± 2.0 E: ± 2.5	LZ: $0 \sim +70$ HZ: $-20 \sim +70$ F3: $-30 \sim +85$ D3: $-40 \sim +85$	1: 1.8 2: 2.5 33: 3.3 F: 1.8~3.3	RTX: Blank RTV: 26: $\pm 7 \sim \pm 16$	-	S: Clipped Sine Wave C: CMOS	-	-	-	TR

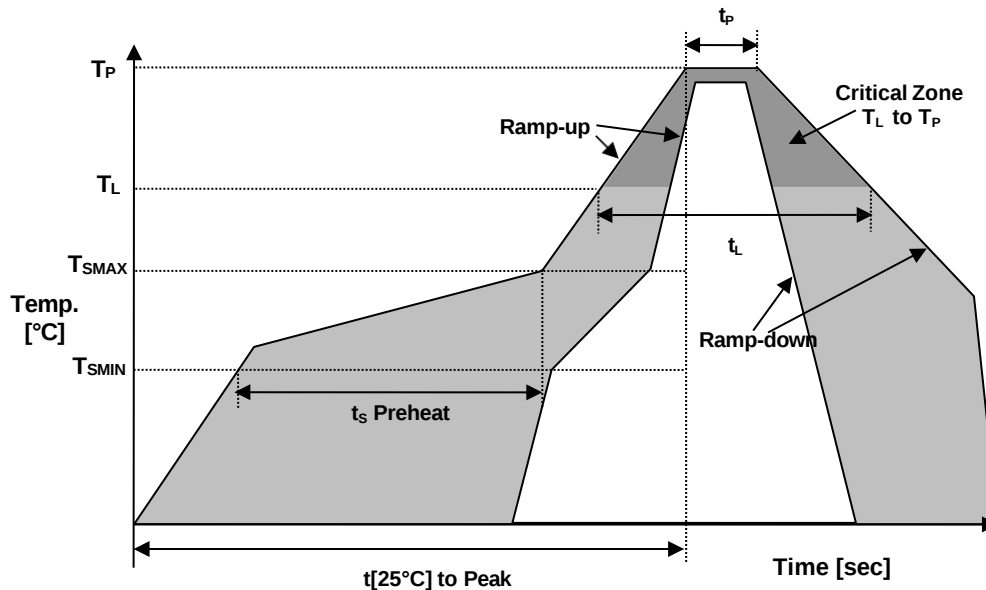
EXAMPLE: RTX-124AF31-S-48.000-TR

Surface Mount TCXO, 5.0 mm x 3.2 mm package, $\pm 0.5 \text{ ppm}$ Stability over the Operating Temperature Range from -30°C to $+85^{\circ}\text{C}$, 3.3V, Clipped Sinewave, 48.000 MHz, Tape and Reel Packaging

MECHANICAL SPECIFICATIONS



REFLOW PROFILE



Reflow profile		
Temperature Min Preheat	T _S MIN	150°C
Temperature Max Preheat	T _S MAX	200°C
Time (T _S MIN to T _S MAX)	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°C] to Peak Temperature	t[25°C] to Peak	480 sec.
Time	t _L	60-150 sec.

ENVIRONMENTAL

PARAMETER	VALUE
MOISTURE SENSITIVITY LEVEL	1
RoHS	COMPLIANT
REACH SVHC	COMPLIANT
HALOGEN-FREE	COMPLIANT
TERMINATION FINISH	Au



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