



actual size

# Oscillator JT53L(V) · (VC)TCXO

- Temp. Compensated Crystal Oscillator, 5.0 x 3.2 mm
- low power VCTCXO or TCXO
- temperature range -40 °C ~ +85 °C available
- reflow soldering temperature: 260 °C max.
- ceramic/metal package



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

## GENERAL DATA

TYPE		JT53L / JT53LV	
frequency range		6.0 ~ 45.0 MHz	
frequency stability	at +25°C	± 0.5 ppm	
	temperature	± 1 ppm ~ ± 5 ppm (table 1)	
	aging first year	± 1 ppm	
	supply voltage	± 0.2 ppm (at $V_{DC} \pm 5\%$ )	
	load change	± 0.2 ppm	
current consumption		2.5 mA max.	
supply voltage $V_{DC}$		2.5 V (± 4%) and 2.8 V / 3.0 V / 3.3 V (± 5%)	
temperature	operating	see table 1	
	storage	-45 °C ~ +85 °C	
output	load nom.	10 KΩ // 10 pF	
	level min.	0.8 Vpp (clipped sine)	
external tuning range JT53LV		± 8 ppm min.	
external tuning voltage		1.5 V ± 1.0 V	
start-up time max.		2.5 ms	
phase noise	at 100 Hz	-113 dBc/Hz typ.	
	at $f_0$	at 1 KHz	-135 dBc/Hz typ.
		at 10 KHz	-140 dBc/Hz typ.

## TABLE 1: FREQUENCY STABILITY VS. TEMPERATURE

operating temperature code	frequency stability code / ppm					
	Y	Z	A	B	C	D
A: -30 °C ~ +80 °C	± 5.0	± 3.0	± 2.5	± 2.0	± 1.5	± 1.0
B: -20 °C ~ +70 °C	○	○	○	○	○	○
C: -10 °C ~ +60 °C	○	○	○	○	○	○
D: 0 °C ~ +85 °C	○	○	○	○	○	○
E: 0 °C ~ +55 °C	○	○	○	○	○	○
F: -10 °C ~ +70 °C	○	○	○	○	○	○
G: -30 °C ~ +75 °C	○	○	○	○	○	○
H: -20 °C ~ +75 °C	○	○	○	○	○	○
K: -40 °C ~ +85 °C	○	○	○	○	○	○
L: -20 °C ~ +85 °C	○	○	○	○	○	○
M: -30 °C ~ +85 °C	○	○	○	○	○	○

○ on request

## NOTE

- TCXO JT53L: pin #1 connected to ground
- VCTCXO JT53LV: pin #1 connected to control voltage
- external AC coupling for output recommended

## DIMENSIONS

top view

side view

bottom view

pad layout

TCXO JT53L	VCTCXO JT53LV
# 1: GND	# 1: Vcontrol
# 2: GND	# 2: GND
# 3: output	# 3: output
# 4: $V_{DC}$	# 4: $V_{DC}$

pin connection

in mm

## ORDER INFORMATION

0	frequency	type	frequency stability code	operating temp. code	supply voltage
Oscillator	6.0 ~ 45.0 MHz	JT53L = TCXO JT53LV = VCTCXO	A - Z see table 1	A - M see table 1	2.5 = 2.5 V ± 4% 2.8 = 2.8 V 3.0 = 3.0 V 3.3 = 3.3 V } ± 5%

**Example: 0 26.0-JT53L-A-B-3.3-LF** (Suffix LF = RoHS compliant / Pb free)

