



actual size

# Oscillator · (VC)TCXO · JT32(V)

Temp. Compensated Crystal Oscillator · 3.2 x 2.5 mm

- low power VCTCXO or TCXO
- temperature range -40 °C ~ +85 °C available
- reflow soldering temperature: 260 °C max.
- ceramic/metal package



## General Data

type		JT32 / JT32V
frequency range		8.0 ~ 45.0 MHz
frequency stability	at +25 °C	± 0.5ppm
	temperature	± 1ppm ~ ± 5ppm (table 1)
	aging first year	± 1ppm
	supply voltage	± 0.2ppm (at V <sub>DC</sub> ± 5%)
	load change	± 0.2ppm
current consumption max.		2.5mA max.
supply voltage V <sub>DC</sub>		2.5 / 2.8 / 3.0 / 3.3 (± 5%)
temperature	operating	see table 1
	storage	-40 °C ~ +85 °C
output	load nom.	10KΩ // 10pF
	level min.	0.8Vpp (clipped sine)
external tuning range JT32 V		± 8ppm min.
external tuning voltage		1.5 V ± 1.0 V
start-up time max.		2.5 ms
phase noise	at 100Hz	-113 dBc/Hz
	at f <sub>o</sub>	-135 dBc/Hz
13 MHz	at 10KHz	-145 dBc/Hz

Table 1: Frequency Stability vs. Temperature

operating temperature code	frequency stability code					
	Y	Z	A	B	C	D
Y: ± 5.0 ppm						
Z: ± 3.0 ppm						
A: ± 2.5 ppm						
B: ± 2.0 ppm						
C: ± 1.5 ppm						
D: ± 1.0 ppm						
A: -30 °C ~ +80 °C	○	○	○	○	○	○
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	○	○	○	○		

● standard ○ available

## Note

- TCXO JT32: pin #1 connected to ground
- VCTCXO JT32V: pin #1 connected to control voltage
- external AC coupling for output recommended

## Dimensions

**TCXO JT32**  
 # 1: GND  
 # 2: nc  
 # 3: GND  
 # 4: output  
 # 5: nc  
 # 6: V<sub>DC</sub>

**VCTCXO JT32V**  
 # 1: V<sub>control</sub>  
 # 2: nc  
 # 3: GND  
 # 4: output  
 # 5: nc  
 # 6: V<sub>DC</sub>

do not connect pin # 2 and # 5 and center pads

in mm

## Order Information

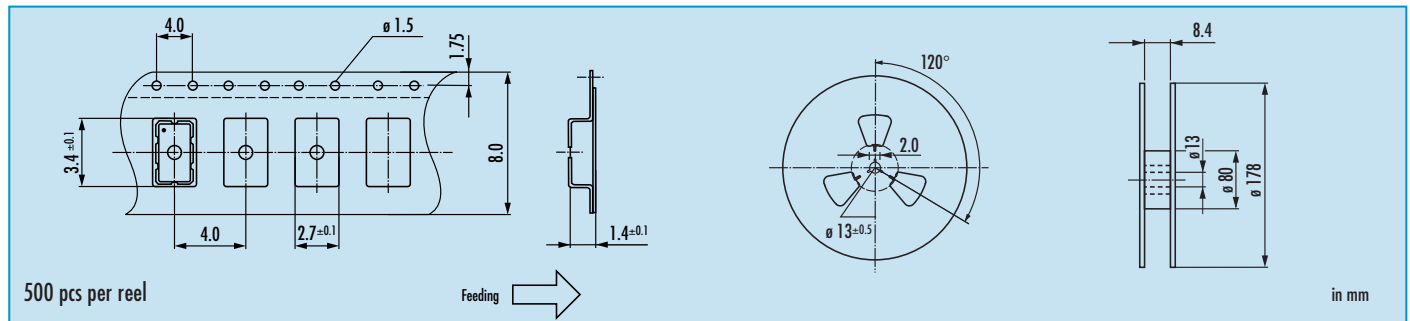
0	frequency in MHz	type	frequency stability code	operating temp. code	supply voltage
Oscillator	8.0 ~ 45.0 MHz	JT32 = TCXO JT32V = VCTCXO	A - Z see table 1	A - K see table 1	2.5 = 2.5 V 2.8 = 2.8 V 3.0 = 3.0 V 3.3 = 3.3 V

Example: O 13.0-JT32-A-G-3.3-LF (Suffix LF = RoHS compliant / Pb free pads)

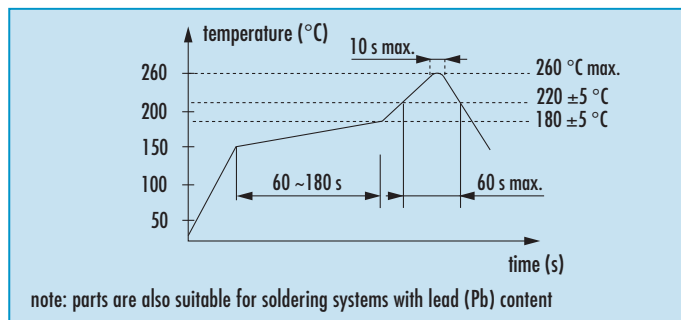


# Oscillator · (VC-)TCXO · JT32(V)

## Taping Specification



## Reflow Soldering Profile



## Marking

type / frequency  
company code / date code

date code:  
A ~ M: Jan.- Dec.  
9: 2009  
0: 2010  
1: 2011

Jan.	Febr.	Mar.	Apr.	May	June
A	B	C	D	E	F
July	Aug.	Sept.	Oct.	Nov.	Dec.
G	H	J	K	L	M

## Packing Note

- standard packing units are 500 pieces per reel
- non-multiple packing units are only supplied taped / bulk