



actual size

# Oscillator · TCXO · JT22G

Temp. Compensated Crystal Oscillator · 2.5 x 2.0 mm

- high stability TCXO for GPS applications
- temperature range -30 °C ~ +85 °C
- reflow soldering temperature: 260 °C max.
- ceramic/metal package



## General Data

type		JT22G
frequency range		16.368 ~ 27.456 MHz
frequency stability	at +25 °C	± 1.5 ppm*
	temperature	± 0.5 ppm
	aging first year	± 1 ppm
	supply voltage	± 0.2ppm (at V <sub>DC</sub> ± 5%)
	load change	± 0.2ppm
current consumption max.		2.0 mA max.
supply voltage V <sub>DC</sub>		1.8 / 2.8 / 3.0 / 3.3 (± 5%)
temperature	operating	-30 °C ~ +85 °C
	storage	-40 °C ~ +85 °C
output	load nom.	10KΩ // 10pF
	level min.	0.8Vpp (clipped sine)
start-up time max.		2.5 ms

\* frequency tolerance after double reflow

Table 1:

nominal frequencies							Unit
16.368	16.369	19.2	23.104	24.5535	26.0	27.456	MHz

Table 2: Phase Noise

offset →	@ 10 Hz	@ 100 Hz	@ 1 kHz	@ 10 kHz	Unit
16.3 ~ 24.5 MHz	-85	-102	-133	-148	dBc/Hz
26.0 ~ 27.4 MHz	-70	-105	-130	-145	dBc/Hz

## Note

- external AC coupling for output recommended

## Dimensions

top view

side view

bottom view

pad layout

TCXO  
JT22G

- # 1: GND
- # 2: N.C.
- # 3: GND
- # 4: output
- # 5: N.C.
- # 6: Vcc

pin connection

in mm

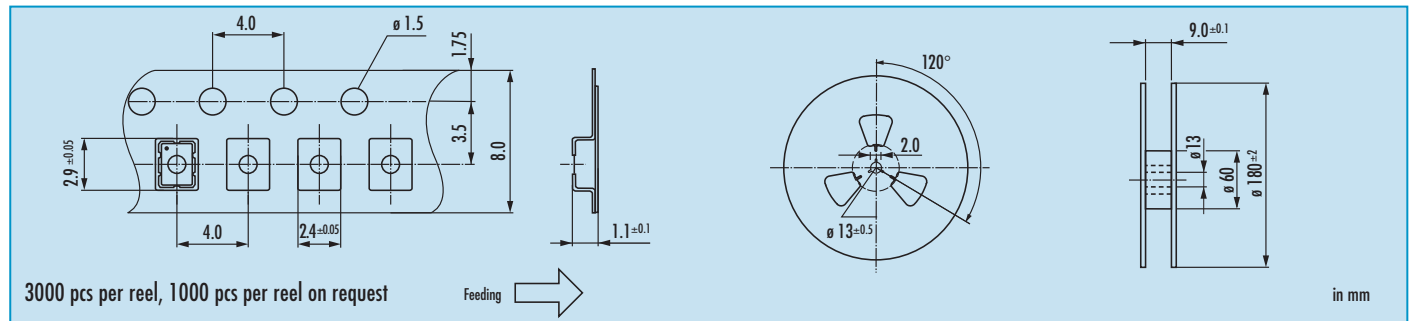
## Order Information

0	frequency in MHz	type	frequency stability code	operating temp. code	supply voltage
Oscillator	16.368 ~ 27.456 MHz	JT22G = TCXO	E = ± 0.5 ppm	M = -30 °C ~ +85 °C	1.8 = 1.8 V 2.8 = 2.8 V 3.0 = 3.0 V 3.3 = 3.3 V

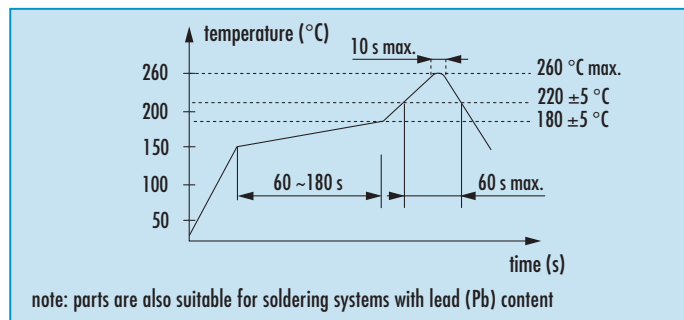
**Example:** O 16.3680-JT22G-E-M-3.3-LF (Suffix LF = RoHS compliant / Pb free pads)

# Oscillator · TCXO · JT22G

## Taping Specification



## Reflow Soldering Profile



## Marking

lot no.

company code / frequency / date code (YM)

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 3000 pieces per reel
- non-multiple packing units are only supplied taped / bulk