



actual size

# Oscillator JT22S(V) · (VC)TCXO

- Temp. Compensated Crystal Oscillator, 2.5 x 2.0 mm
- low power VCTCXO or TCXO
- temperature range -40 °C ~ +85 °C available
- ± 1.0 ppm stability available
- ceramic/metal package



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

## GENERAL DATA

TYPE		JT22S / JT22SV
frequency range		9.5 ~ 52.0 MHz
frequency tolerance/ stability	at +25°C	± 2.0 ppm (incl. 2x reflow)
	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		1.5 mA max. < 26 MHz / 2.5 mA max. < 52 MHz
supply voltage $V_{DC}$		1.8 / 2.5 / 2.8 / 3.0 / 3.3 (± 5%) *
temperature	operating	see table 1
	storage	-40 °C ~ +85 °C
output	load nom.	10 KΩ // 10 pF
	level min.	0.8 Vpp (clipped sine)
external tuning range JT22SV		± 8 ppm min.
external tuning voltage JT22SV		0.9 V ± 0.9 V at $V_{DC} = 1.8$ V (standard)
		1.5 V ± 1.0 V at $V_{DC} \geq 2.5$ V (standard)
		1.4 V ± 1.0 V at $V_{DC} \geq 2.5$ V (option)
start-up time max.		2.5 ms
phase noise	at 100 Hz	-109 dBc/Hz typ.
	at $f_0$	at 1 KHz
26 MHz	at 10 KHz	-148 dBc/Hz typ.

## TABLE 1: FREQUENCY STABILITY VS. TEMPERATURE

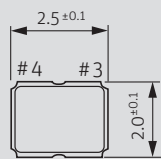
operating temperature code	frequency stability code / ppm					
	Y	Z	A	B	C	D
A: -30 °C ~ +80 °C	± 5.0	± 3.0	± 2.5	± 2.0	± 1.5	± 1.0
B: -20 °C ~ +70 °C	○	○	○	○	○	○
C: -10 °C ~ +60 °C	○	○	○	○	○	○
D: 0 °C ~ +85 °C	○	○	○	○	○	○
E: 0 °C ~ +55 °C	○	○	○	○	○	○
F: -10 °C ~ +70 °C	○	○	○	○	○	○
G: -30 °C ~ +75 °C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

○ on request

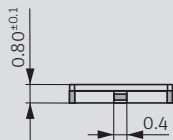
## NOTE

- TCXO JT22S: pin #1 connected to GND
- VCTCXO JT22SV: pin #1 is control voltage  $V_C$
- external AC coupling for output recommended
- \* other nominal supply voltages within 1.8 V ~ 3.3 V need to be specified, ask for availability

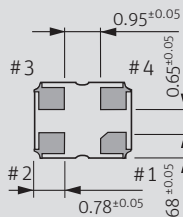
## DIMENSIONS



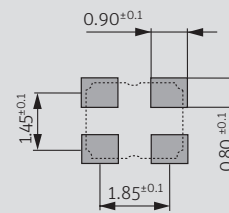
top view



side view



bottom view



pad layout

TCXO JT22S	VCTCXO JT22SV
# 1: GND	# 1: Vcontrol
# 2: GND	# 2: GND
# 3: output	# 3: output
# 4: $V_{DC}$	# 4: $V_{DC}$

pin connection

in mm

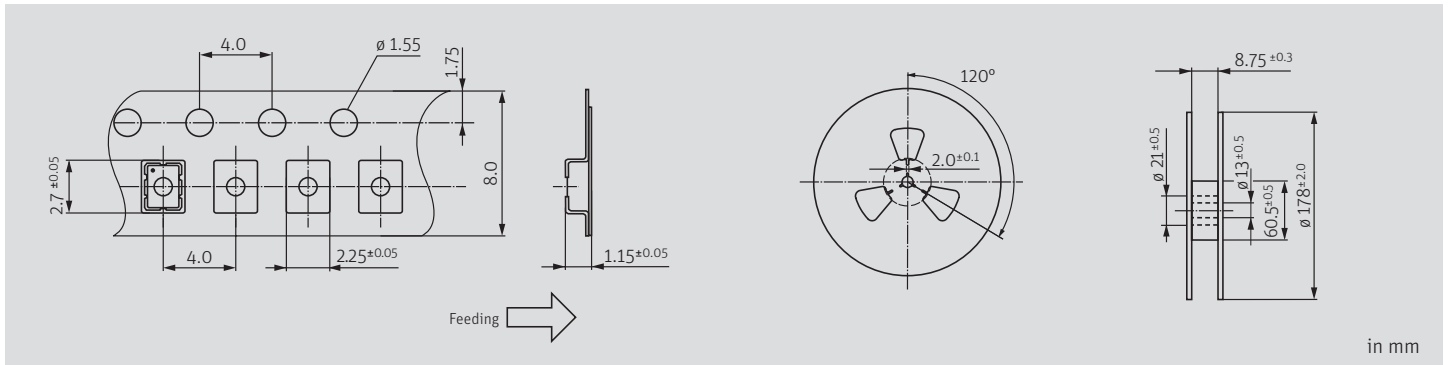
## ORDER INFORMATION

0	frequency	type	frequency stability code	operating temp. code	supply voltage	control voltage (for JT22SV only)
Oscillator	9.5 ~ 52.0 MHz	JT22S = TCXO JT22SV = VCTCXO	A - Z see table 1	A - M see table 1	1.8 = 1.8 V 2.5 = 2.5 V 2.8 = 2.8 V 3.0 = 3.0 V 3.3 = 3.3 V	0.9 = $V_C$ 0.9 V ± 0.9 V at $V_{DC} = 1.8$ V 1.5 = $V_C$ 1.5 V ± 1.0 V at $V_{DC} \geq 2.5$ V 1.4 = $V_C$ 1.4 V ± 1.0 V at $V_{DC} \geq 2.5$ V see General Data

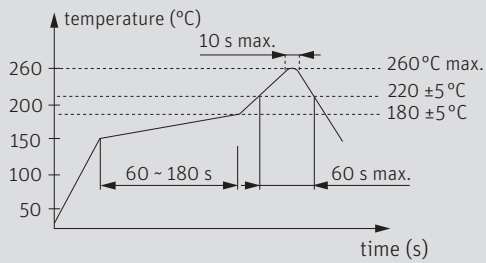
Example: 0 26.0-JT22SV-A-G-3.3-1.5-LF (Suffix LF = RoHS compliant / Pb free)

# Oscillator JT22S(V) · (VC)TCXO

## TAPING SPECIFICATION



## REFLOW SOLDERING PROFILE



note: parts are also suitable for soldering systems with lead (Pb) content

## MARKING

frequency

company code / stability code / date code

date code: A ~ M: Jan. - Dec.

1: 2021    2: 2022    3: 2023    4: 2024    5: 2025    6: 2026

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

## PACKAGING NOTE

- standard packing unit is 500 pieces per reel
- customized quantities on request