



actual size

# Oscillator JT21P(V) · (VC)TCXO

- Temp. Compensated Crystal Oscillator, 2.0 x 1.6 mm
- low power VCTCXO or TCXO
- temperature range -30 °C ~ +85 °C available
- ± 1.0 ppm stability available
- ceramic/metal package



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA		JT21P / JT21PV
frequency range		8.0 ~ 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 (at +25 °C)
	supply voltage	± 0.2 ppm (at $V_{DC} \pm 5\%$ )
	load change	± 0.2 ppm (at 10Kohms    10 pF ±10%)
current consumption		2.0 mA max.
supply voltage $V_{DC}$		1.8 / 2.5 / 2.8 / 3.0 (± 5%) *
temperature	operating	-30 °C ~ +85 °C
	storage	-40 °C ~ +85 °C
output	load nom.	10 KΩ // 10 pF
	level min.	0.8 Vpp (clipped sine)
external tuning range JT21PV		± 8 ppm min.
external tuning voltage JT21PV		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.		2.0 ms
phase noise	at 100 Hz	-120 dBc/Hz typ.
	at fo	
	at 1 KHz	-138 dBc/Hz typ.
	at 10 KHz	-145 dBc/Hz typ.

TABLE 1: FREQUENCY STABILITY VS. TEMPERATURE

operating temperature code	frequency stability code / ppm					
	Y	Z	A	B	C	D
± 5.0	± 3.0	± 2.5	± 2.0	± 1.5	± 1.0	
M: -30 °C ~ +85 °C	○	○	○	○	○	○

○ available

## NOTE

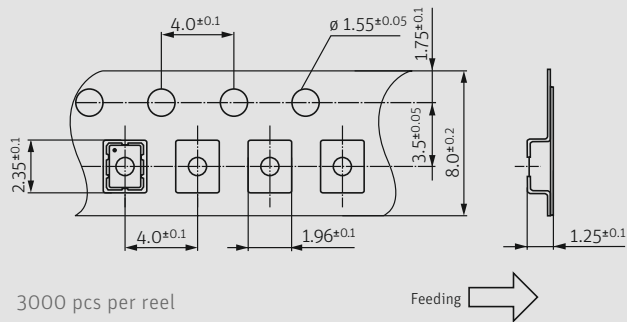
- TCXO JT21P: pin #1 connected to GND
- VCTCXO JT21PV: pin #1 is control voltage  $V_C$
- external AC coupling for output recommended
- \* other nominal supply voltages within 1.8 V ~ 3.0 V need to be specified, ask for availability (supply voltage 3.3V±5% not available)

DIMENSIONS		pin connection	
<p>top view</p>	<p>side view</p>	<p>bottom view</p>	<p>pad layout</p>
		<p>TCXO JT21P</p> <p># 1: GND</p> <p># 2: GND</p> <p># 3: output</p> <p># 4: <math>V_{CC}</math></p>	<p>VCTCXO JT21PV</p> <p># 1: Vcontrol</p> <p># 2: GND</p> <p># 3: output</p> <p># 4: <math>V_{CC}</math></p>

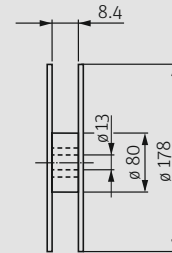
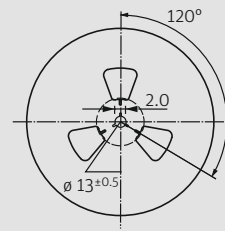
ORDER INFORMATION						
<b>0</b>	frequency	type	frequency stability code	operating temp. code	supply voltage	control voltage (for JT21PV only)
Oscillator	8.0 ~ 52.0 MHz	JT21P = TCXO JT21PV = VCTCXO	A - Z see table 1	M = -30 °C ~ +85 °C	1.8 = 1.8 V 2.5 = 2.5 V 2.8 = 2.8 V 3.0 = 3.0 V	0.9 = $V_C$ 0.9 V ± 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
<b>Example: 0 26.0-JT21PV-D-M-3.0-1.5-LF</b> (Suffix LF = RoHS compliant / Pb free)						

# Oscillator JT21P(V) · (VC)TCXO

## TAPING SPECIFICATION

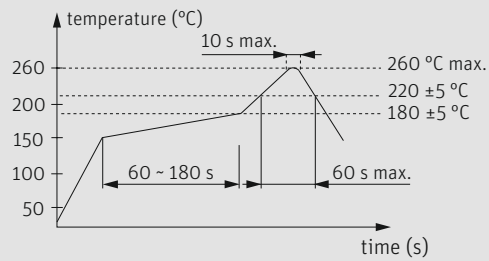


3000 pcs per reel



in mm

## REFLOW SOLDERING PROFILE



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

## PACKAGING NOTE

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

## MARKING

company code / date code / internal code  
frequency / internal code

		January	February	March	April	May	June	July	August	September	October	November	December
2017	2021	A	B	C	D	E	F	G	H	J	K	L	M
2018	2022	N	P	Q	R	S	T	U	V	W	X	Y	Z
2019	2023	a	b	c	d	e	f	g	h	j	k	l	m
2020	2024	n	p	q	r	s	t	u	v	w	x	y	z