



actual size

Oscillator JT21G · TCXO for GPS

- Temp. Compensated Crystal Oscillator, 2.0 x 1.6 mm
- special type for navigation systems (GPS etc.)
- high stability ± 0.5 ppm
- temperature range up to $-40^\circ\text{C} \sim +85^\circ\text{C}$



RoHS compliant



Pb free



REACH
compliant



Conflict
mineral free

GENERAL DATA

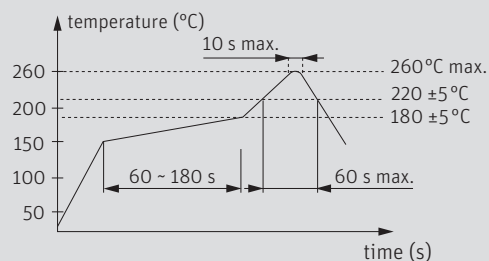
TYPE		JT21G TCXO
frequency range		26.0 / 38.40 MHz (other frequ. case by case)
frequency tolerance/stability	at $+25^\circ\text{C}$	± 2.0 ppm (incl. 2x reflow)
	temperature	± 0.5 ppm (stability code E)
	aging first year	± 1 ppm
	supply voltage	± 0.2 ppm (at $V_{\text{DC}} \pm 5\%$)
	load change	± 0.2 ppm (at 10 K Ω 10 pF $\pm 10\%$)
current consumption		2.0 mA (at 26.0 / 38.40 MHz)
supply voltage V_{DC}		1.8 / 2.5 / 2.8 / 3.0 / 3.3 ($\pm 5\%$) *
temperature	operating	$-30^\circ\text{C} \sim +85^\circ\text{C}$ (temperature code M) $-40^\circ\text{C} \sim +85^\circ\text{C}$ (temperature code K)
	storage	$-40^\circ\text{C} \sim +85^\circ\text{C}$
output	load nom.	10 K Ω 10 pF
	level min.	0.8 Vpp (clipped sine)
temperature slope max.		0.1 ppm / $^\circ\text{C}$ (at max. temp step 2°C)
static frequency hysteresis (max. frequency difference at $+25^\circ\text{C}$, measured before and after a full cold-hot-cold cycle)		0.6 ppm
start-up time max.		2.5 ms
phase noise	at 100 Hz	-117 dBc/Hz typ.
at f_0	at 1 KHz	-137 dBc/Hz typ.
26 MHz	at 10 KHz	-149 dBc/Hz typ.

NOTE

- JT21G: connect pin #1 to GND
- external AC coupling for output recommended
- for best supply noise rejection, connect a capacitor closely to the supply voltage pins
- a separate voltage supply rail ensures best phase noise

* other nominal supply voltages within 1.8 V ~ 3.3 V need to be specified, ask for availability

REFLOW SOLDERING PROFILE

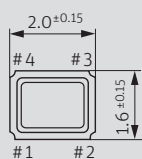


note: parts are also suitable for soldering systems with lead (Pb) content

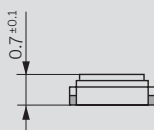
PACKAGING NOTE

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

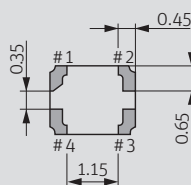
DIMENSIONS



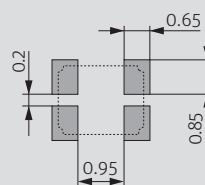
top view



side view



bottom view



pad layout

TCXO
JT21G
1: GND
2: GND
3: output
4: V_{DC}

pin connection

in mm

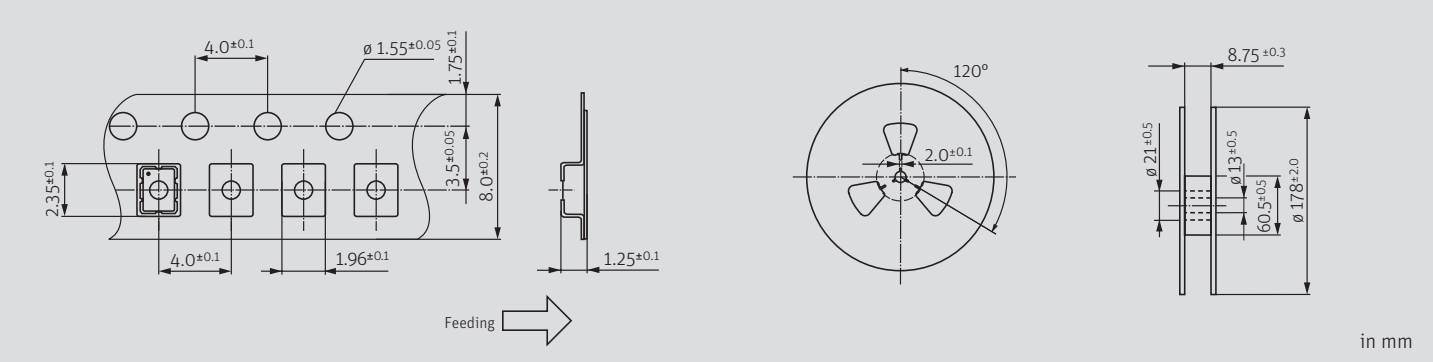
ORDER INFORMATION

0	frequency	type	frequency stability code	operating temp. code	supply voltage
Oscillator	26.0 = 26.0 MHz 38.40 = 38.40 MHz	JT21G	E = ± 0.5 ppm	M = $-30^\circ\text{C} \sim +85^\circ\text{C}$ K = $-40^\circ\text{C} \sim +85^\circ\text{C}$	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

Example: 0 26.0-JT21G-E-M-3.3-LF (Suffix LF = RoHS compliant / Pb free)

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TAPING SPECIFICATION



MARKING

frequency

company code / stability code / date code

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

2: 2022 3: 2023 4: 2024 5: 2025 6: 2026 7: 2027

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