



actual size

Oscillator JT21ETE · TCXO

- temp. compensated crystal oscillator, 2.0 x 1.6 mm
- low power TCXO with clipped sine output
- wide temperature range up to -40 °C ~ +105 °C
- with standby function
- for navigation system use, please prefer JT21G



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA

TYPE		JT21ETE TCXO with standby function
frequency range		12.0 ~ 52.0 MHz
frequency tolerance / stability	at +25 °C	± 2.0 ppm (incl. 2x reflow)
	temperature	± 2.0 ppm ~ ± 10.0 ppm (see table 1)
	aging first year	± 1.0 ppm (at +25 °C)
	supply voltage	± 0.2 ppm (at $V_{DC} \pm 5\%$)
	load change	± 0.2 ppm (at nominal load ± 10%)
current consumption		1.5 mA max. ≤ 26 MHz / 2.5 mA max. ≤ 52 MHz
supply voltage V_{DC}		1.8V / 2.5V / 2.8V / 3.0V / 3.3V (±5%)
temperature	operating	see table 1
	storage	-40 °C ~ +105 °C
output	load nom.	10 kΩ // 10 pF
	level min.	0.8 x Vpp (clipped sine)
standby function of JT21ETE		stop function, see table 2
disabled supply current		2μA typ. / 5.5 μA max.
start-up time max.		2.5 ms
enable time max.		2.5 ms
disable time max.		150 ns
phase jitter	at 100 Hz	-122dBc/Hz typ.
	at 1 KHz	-142 dBc/Hz typ.
	at 10 KHz	-155 dBc/Hz typ.

TABLE 1: FREQUENCY STABILITY VS. TEMPERATURE

frequency stability		B	A	Y	X
temperature code		± 2.0 ppm	± 2.5 ppm	± 5.0 ppm	± 10.0 ppm
-40 °C ~ +85 °C	K	Δ	○	○	
-40 °C ~ +105 °C	P		○	○	○

○ on request Δ case-by-case, ask if available

TABLE 2: ENABLE / DISABLE FUNCTION

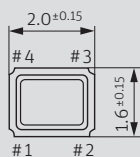
PIN #1 (E/D CONTROL)	PIN #3 (OUTPUT)
high "1" ($V_{IH} \geq 0.8 V_{DC}$)	active (see information below)
low "0" ($V_{IL} \leq 0.2 V_{DC}$)	high impedance

stop function of JT21ETE:
 - oscillator stops
 - output high impedance
 - to activate permanently, please connect an external pull-up resistor of 10 kΩ to pin #1

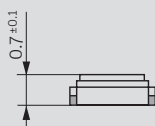
NOTE

- TCXO JT21ETE: pin #1 controls the standby function, external pull-up resistor required
- external AC coupling for output recommended
- * other nominal supply voltages within 1.8 V ~ 3.3 V need to be specified, ask for availability

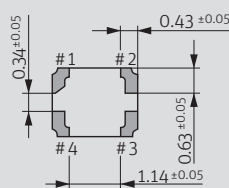
DIMENSIONS



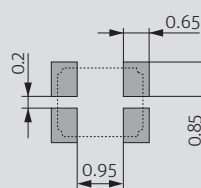
top view



side view



bottom view



pad layout

TCXO
JT21ETE
1: e/d
2: GND
3: output
4: V_{DC}

pin connection

in mm

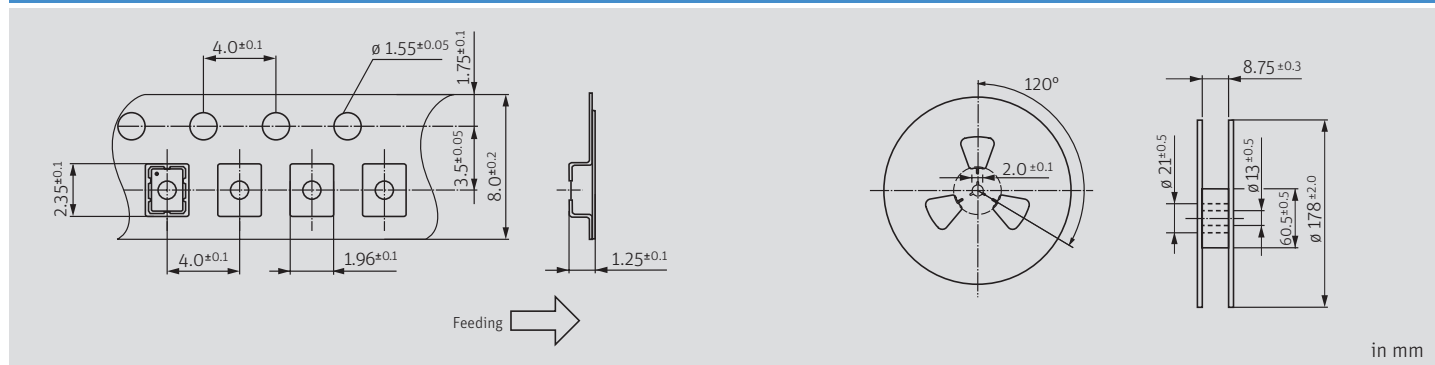
ORDER INFORMATION

0	frequency	type	frequency stability code	operating temp. code	supply voltage
Oscillator	12.0 ~ 52.0 MHz	JT21ETE = TCXO with e/d	A, B, X, Y see table 1	K = -40 °C ~ +85 °C P = -40 °C ~ +105 °C 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

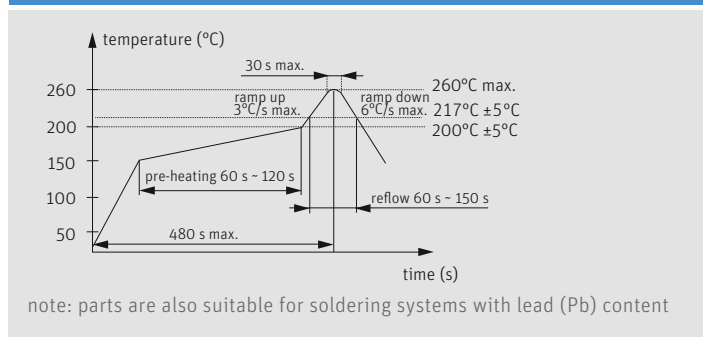
Example: 0 48.0-JT21ETE-Y-P-3.3-LF (Suffix LF = RoHS compliant / Pb free)

Oscillator JT21ETE · Wide Temperature Range TCXO

TAPING SPECIFICATION



REFLOW SOLDERING PROFILE



MARKING

frequency

company code / date code

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

5: 2025 6: 2026 7: 2027 8: 2028 9: 2029 0: 2030

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 packaging unit is 500 pieces per reel
- customized quantities on request