

actual size

# Oscillator JT11LE · low voltage TCXO

- temp. compensated crystal oscillator, 1.6 x 1.2 mm
- 1.2V ~ 1.8V low voltage TCXO with clipped sine output
- temp. range -40 °C ~ +85 °C and ± 0.5 ppm stability available
- with energy-saving standby function
- for navigation system use, please prefer JT11GLE



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA		
TYPE	JT11LE clipped sine low voltage TCXO	
standard frequencies	19.20 / 26.0 / 38.40 / 52.0 MHz	
frequency tolerance/ stability	at +25°C	±2.0 ppm (incl. 2x reflow)
	temperature	±0.5 ppm ~ ±5 ppm (table 1)
	aging first year	±1 ppm
	supply voltage	±0.2 ppm (at any $V_{DC}$ ±5%)
	load change	±0.2 ppm (at 10 KΩ    10 pF ±10%)
current consumption	1.5 mA max. ≤ 26 MHz / 2.5 mA max. ≤ 52 MHz	
supply voltage $V_{DC}$	1.2 V -5% ~ 1.8 V +5% (variable)	
temperature	operating	see table 1
	storage	-40 °C ~ +85 °C
output	load nom.	10 KΩ // 10 pF
	level min.	0.8 Vpp (clipped sine)
standby function	stop function, see table 2	
disabled supply current	0.1 μA typ. / 1.0 μA max.	
start-up time max.	3.0 ms	
enable time max.	3.0 ms	
disable time max.	150 ns	
phase noise at $f_0$ 26 MHz	at 100 Hz	-115 dBc/Hz typ.
	at 1 KHz	-136 dBc/Hz typ.
	at 10 KHz	-147 dBc/Hz typ.

TABLE 1: FREQUENCY STABILITY VS. TEMPERATURE							
operating temperature code	frequency stability code / ppm						
	Y	Z	A	B	C	D	E
B: -20 °C ~ +70 °C	○	○	○	○	○	○	○
G: -30 °C ~ +75 °C	○	○	○	○	○	○	○
M: -30 °C ~ +85 °C	○	○	○	○	○	○	○
K: -40 °C ~ +85 °C	○	○	○	○	○	○	○

○ on request

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" ( $V_{IL} \leq 0.2 V_{DC}$ )	oscillator stops, output high impedance

Important: To activate the TCXO permanently, please connect an external pull-up resistor of 10 kΩhm to pin #1

**NOTE**

- external AC coupling for output recommended
- for best supply noise rejection, connect a capacitor closely to the supply voltage pins
- for higher supply voltages 1.8 V / 2.5V / 3.3 V refer to: JT11S (TCXO) and JT11SV (VCTCXO)
- standard frequencies are 19.20 / 26.0 / 38.40 and 52.0 MHz

Please contact Jauch to ask for other frequencies

**DIMENSIONS**

top view      side view      bottom view      pad layout      pin connection      in mm

TCXO  
JT11LE  
#1: e/d  
#2: GND  
#3: output  
#4:  $V_{DC}$

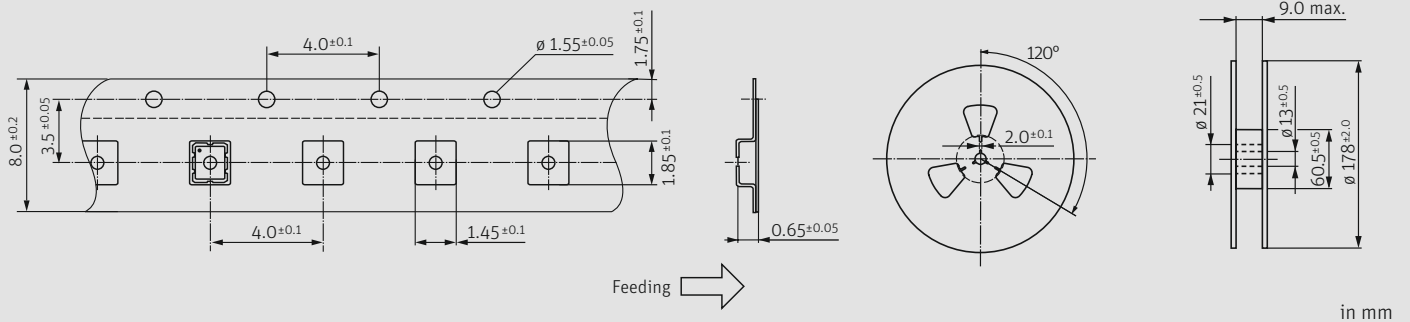
**ORDER INFORMATION**

<b>0</b>	standard frequencies	type	frequency stability code	operating temp. code	supply voltage code
Oscillator	19.20 MHz / 26.0 MHz 38.40 MHz / 52.0 MHz	JT11LE = TCXO	A - Z see table 1	A - M see table 1	V = variable supply voltage 1.2 V -5% ~ 1.8 V +5%

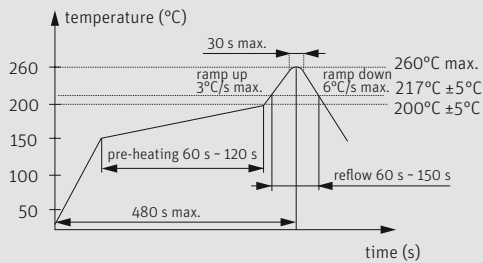
**Example: 0 26.0-JT11LE-A-G-V-LF** (Suffix LF = RoHS compliant / Pb free)

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## 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.

4: 2024   5: 2025   6: 2026   7: 2027   8: 2028   9: 2029

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 3000 pieces per reel
- customized quantities on request