



actual size

# Oscillator JOE32 · PECL · 2.5 V

- SMD Low Voltage PECL Oscillator, 3,2 x 2,5 mm
- drives fast PECL logic
- complementary outout, low EMI
- compact & flat ceramic / metal package



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA		JOE32 2.5V (3rd OT)
<b>TYPE</b>		
frequency range	65.0 ~ 190.0 MHz	
frequency stability over all*	±25 ppm ~ ±100 ppm (see table 1)	
current consumption	55 mA max.	
supply voltage V <sub>DC</sub>	2.5 V ±5%	
temperature	operating	-20 °C ~ +70 °C (T0)
		-40 °C ~ +85 °C (T1)
		-40 °C ~ +105 °C (T2 Δ)
		-40 °C ~ +125 °C (T3 Δ)
storage	-55 °C ~ +125 °C	
output	rise & fall time	0.6 ns (20% ~ 80% of V <sub>pp</sub> )
	load nom.	50 Ω at 0.5 V
	low level max.	0.88 V
	high level min.	1.47 V
output enable time max.	10 ms	
output disable time max.	200 ns	
start-up time max.	10 ms	
standby function	stop	
standby current max.	10 μA	
phase jitter 12 kHz ~ 20.0 MHz	< 0.5 ps RMS	
symmetry at 50% of V <sub>pp</sub>	45% ~ 55% (40% ~ 60% if T3)	

Δ ask for availability of higher temperature ranges and frequency stabilities

## TABLE 1: FREQUENCY STABILITY CODE

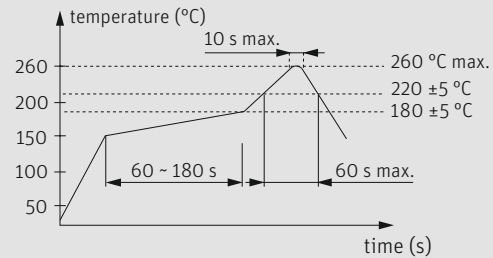
stability code	temp. code*	A	B	G	C
		±100 ppm	±50 ppm	±30 ppm	±25 ppm
-20 °C ~ +70 °C	T0	○	○	○	○
-40 °C ~ +85 °C	T1	○	○	○	
-40 °C ~ +105 °C	T2 Δ	○	○		
-40 °C ~ +125 °C	T3 Δ	○	○		

\* includes stability at 25 °C, operating temp. range, supply voltage change, shock and vibration, aging 1st year.

## ENABLE / DISABLE FUNCTION

pin #1 (e/d control)	pin #4 / #5 (outputs)
open or ≥ 0.7 V <sub>CC</sub>	enable
gnd or ≤ 0.3 V <sub>CC</sub>	high impedance

## REFLOW SOLDERING PROFILE



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

### DIMENSIONS

top view

side view

bottom view

pad layout

# 1: e/d  
# 2: nc  
# 3: ground  
# 4: output 1  
# 5: output 2  
# 6: V<sub>CC</sub>

pin connection

in mm

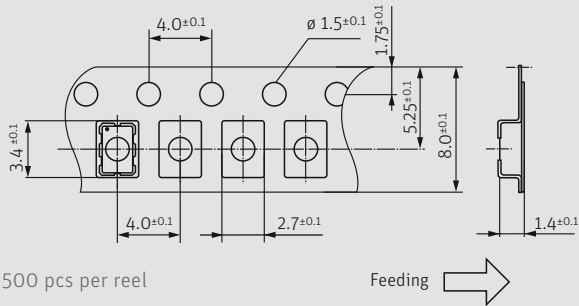
### ORDER INFORMATION

<b>0</b>	frequency	type	frequency stability code	supply voltage code	option
Oscillator	65.0 ~ 190.0 MHz	JOE32	see table 1	2.5 = 2.5 V	T0 = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C please ask T3 = -40 °C ~ +125 °C please ask

**Example: 0 156.250-JOE32-B-2.5-T1-LF** (Suffix LF = RoHS compliant / Pb free)

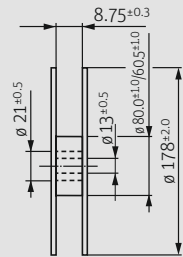
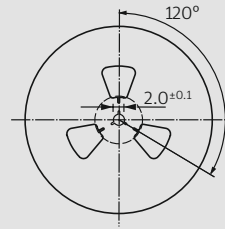
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## TAPING SPECIFICATION



500 pcs per reel

Feeding



in mm

## PACKAGING NOTE

- standard packing unit is 500 pieces per reel
- non-multiple packing units are only supplied taped / bulk

## MARKING

company code / frequency

□ DB / internal code / date code

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

7: 2017   8: 2018   9: 2019   0: 2020   1: 2021   2: 2022

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