



actual size

Oscillator · PECL · JOE32 · 2.5 V

SMD Oscillator Low Voltage PECL · 3.2 x 2.5 mm

- drives fast PECL logic
- complementary output, low EMI
- reflow soldering temperature: 260 °C max.
- compact & flat ceramic/metal package



General Data

type	JOE32 2.5V (3rd OT)	
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	2.5 V ± 5%	
temperature	operating	
	-20 °C ~ +70 °C (T0)	
	-40 °C ~ +85 °C (T1)	
	-40 °C ~ +105 °C (T2*)	
	-40 °C ~ +125 °C (T3*)	
storage	-55 °C ~ +125 °C	
output	rise & fall time	0.6 ns (20% ~ 80% of Vpp)
	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 ms	
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 Vpp	45% ~ 55% (40% ~ 60% if T3)	

Table 1: Frequency Stability Code

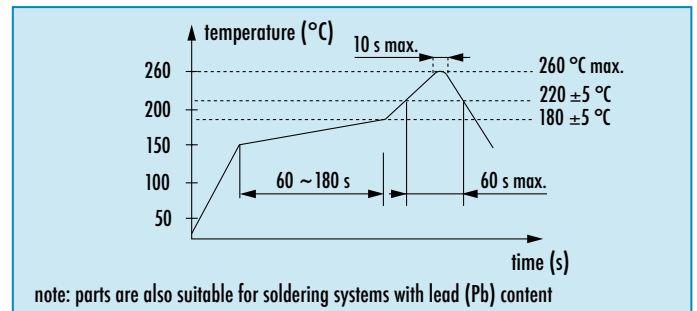
stability code / temp. code*	A	B	G	C
	± 100 ppm	± 50 ppm	± 30 ppm	± 25 ppm
-20 °C ~ +70 °C T0	○	○	○	○
-40 °C ~ +85 °C T1	○	○	○	
-40 °C ~ +105 °C T2*	○	○		
-40 °C ~ +125 °C T3*	○	○		

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

Enable / Disable Function

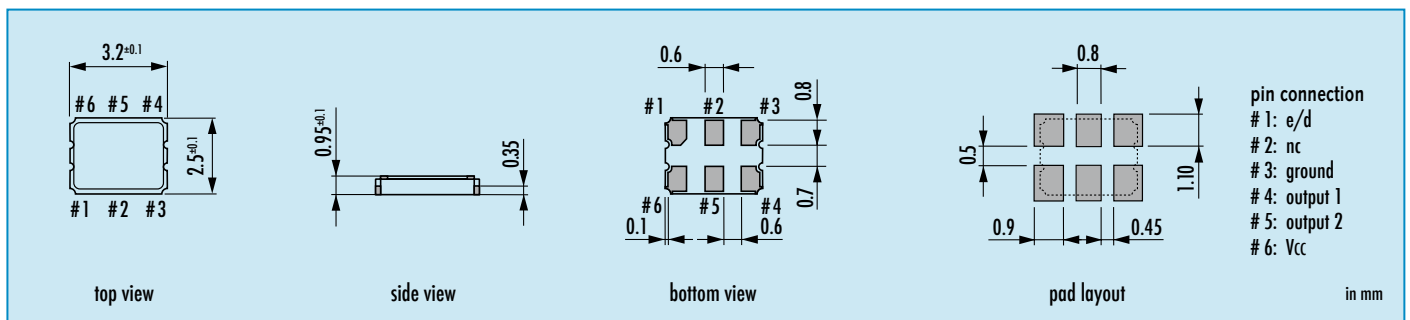
pin #1 (e/d control)	pin #4 / #5 (outputs)
open or ≥ 0.7 V _{CC}	enable
gnd or ≥ 0.3 V _{CC}	high impedance

Reflow Soldering Profile



* ask for availability of higher temperature ranges and frequency stabilities

Dimensions



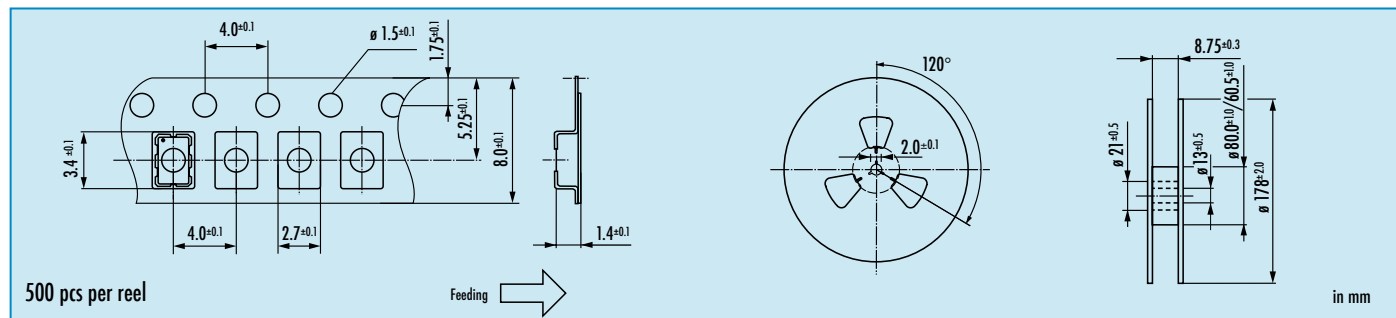
Order Information

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

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Taping Specification



Packing Note

- standard packing units are 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.

6: 2016 9: 2019

7: 2017 0: 2020

8: 2018 1: 2021

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