



actual size

# Oscillator · PECL · JOE53 · 3.3 V

## SMD Oscillator Low Voltage PECL · 5.0 x 3.2 mm

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



### General Data

type		JOE53 3.3V (3rd OT)
frequency range		65.0 ~ 190.0 MHz
frequency stability over all*		± 25 ppm ~ ± 100 ppm (see table 1)
current consumption		60 mA max.
supply voltage		3.3 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	0.4 ns (20% ~ 80% of Vpp)
	load nom.	50 Ω at 1.3 V
	low level max.	1.68 V
	high level min.	2.27 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)

\* ask for availability of higher temperature ranges and frequency stabilities

### Table 1: Frequency Stability Code

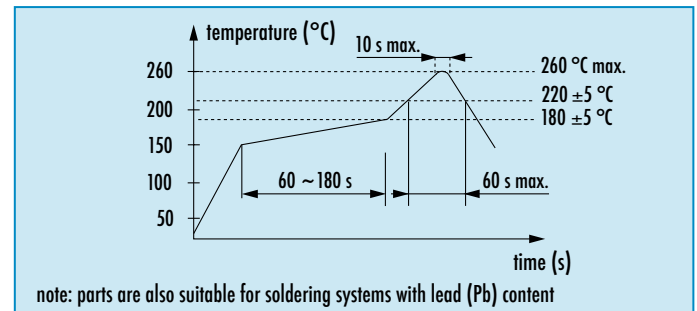
stability code / temp. code*	A	B	G	C
	± 100 ppm	± 50 ppm	± 30 ppm	± 25 ppm
-20 °C ~ +70 °C T0	○	○	○	○
-40 °C ~ +85 °C T1	○	○	○	
-40 °C ~ +105 °C T2*	○	○		
-40 °C ~ +125 °C T3*	○	○		

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

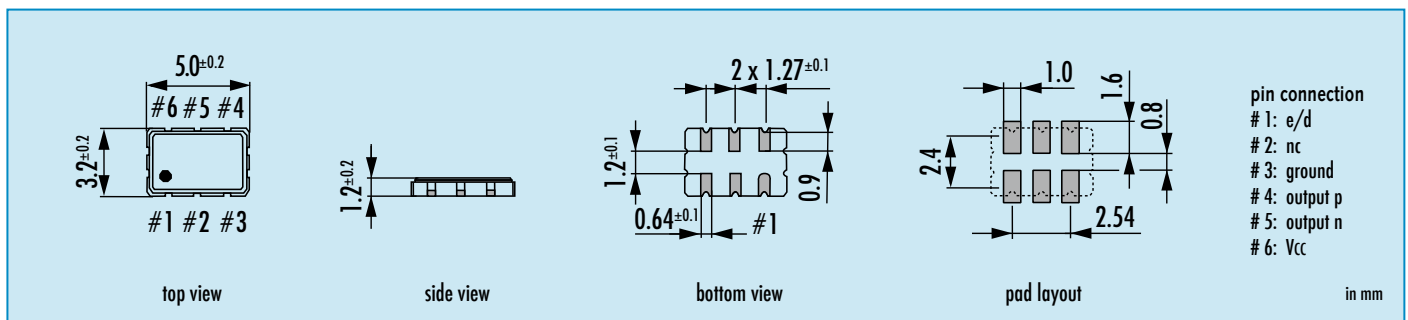
### Enable / Disable Function

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

### Reflow Soldering Profile



### Dimensions



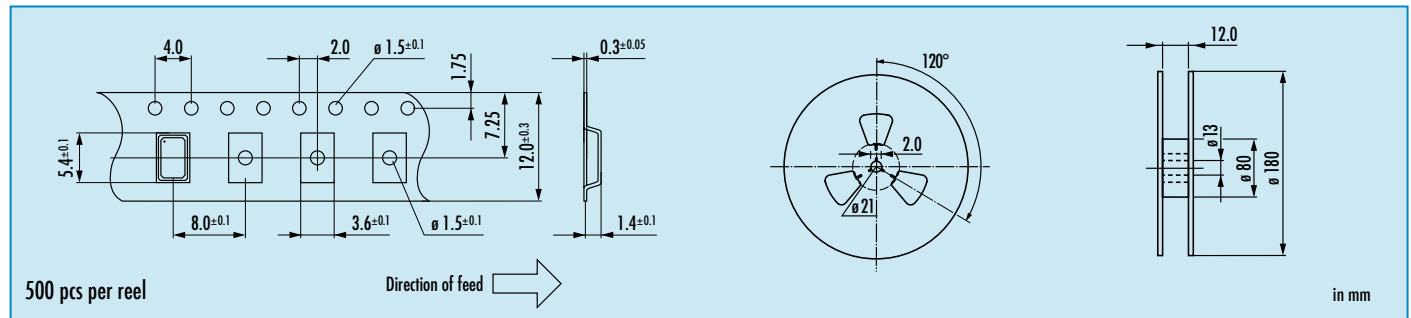
### Order Information

0	frequency	type	frequency stability code	supply voltage code	option
Oscillator	65.0 ~ 190.0 MHz	JOE53	see table 1	3.3 = 3.3 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-JOE53-B-3.3-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

□ CB / 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