



actual size

Oscillator JT53C · TCXO

- TCXO with HCMOS output, 5.0 x 3.2 mm
- excellent phase noise
- operating temperature range -40 °C ~ +85 °C
- ceramic/metal package



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA

TYPE		JT53C
frequency range		4.0 ~ 54.0 MHz
frequency stability	at +25°C	± 0.5 ppm
	temperature	± 2.5 ppm (others on request)
	aging first year	± 1.0 ppm
	supply voltage	± 0.2 ppm (at $V_{DC} \pm 5\%$)
	load change	± 0.2 ppm
	after reflow	± 1.0 ppm
current consumption		see table 1
supply voltage V_{DC}		2.5 / 2.8 / 3.3 (± 5%)
temperature	operating	-30 °C ~ +75 °C / -40 °C ~ +85 °C
	storage	-40 °C ~ +125 °C
output	rise & fall time	5.0 ns max.
	load max.	15 pF
	current max.	4.0 mA
	low level max.	0.1 x V_{DC}
	high level min.	0.9 x V_{DC}
harmonics distortion max.		-5.0 dBc
symmetry at 0.5 x V_{DC}		45% ~ 55% max.
start-up time max.		10 ms
standby current max.		10 µA
output enable time max.		10 ms
output disable time max.		250 ns
jitter 1σ		3.0 ps
phase noise at 10 kHz offset		-145 dBc/Hz

TABLE 1: CURRENT CONSUMPTION MAX.

	4 ~ 10 MHz	~ 20 MHz	~ 30 MHz	~ 40 MHz	~ 54 MHz
2.5 V	3.1 mA	3.7 mA	4.2 mA	4.6 mA	5.5 mA
2.8 V	3.4 mA	4.1 mA	4.7 mA	5.2 mA	6.0 mA
3.3 V	4.0 mA	4.8 mA	5.5 mA	6.0 mA	7.0 mA

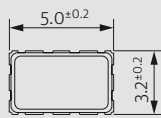
ENABLE / DISABLE FUNCTION

PIN #1 (E/D CONTROL)	PIN #3 (OUTPUT)
open	active
high "1" ($V_{IH} \geq 0.7 V_{DC}$)	active
low "0" ($V_{IL} \leq 0.3 V_{DC}$)	high impedance
stop function: - oscillator stops - output high impedance	

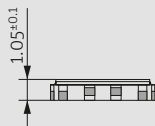
NOTE

4 user pins (e/d, GND, output, V_{DC})
leave the other pins unconnected!

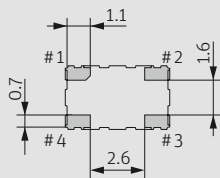
DIMENSIONS



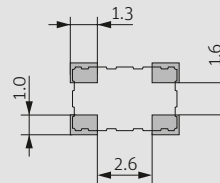
top view



side view



bottom view



pad layout

TCXO
JT53C
1: e/d
2: GND
3: output
4: V_{DC}

pin connection

in mm

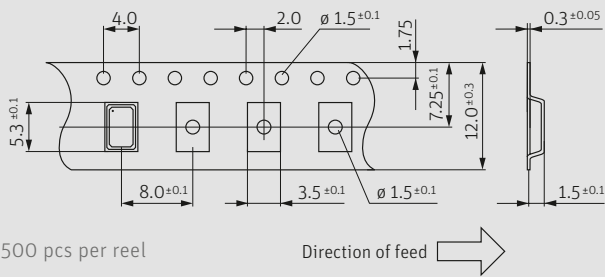
ORDER INFORMATION

0	frequency	type	frequency stability code	operating temp. code	supply voltage
Oscillator	4.0 ~ 54.0 MHz	JT53C = TCXO	A = ±2.5 ppm	G = -30 °C ~ +75 °C K = -40 °C ~ +85 °C	2.5 = 2.5 V 2.8 = 2.8 V 3.3 = 3.3 V

Example: **0 16.3680-JT53C-A-K-3.3-LF** (Suffix LF = RoHS compliant / Pb free)

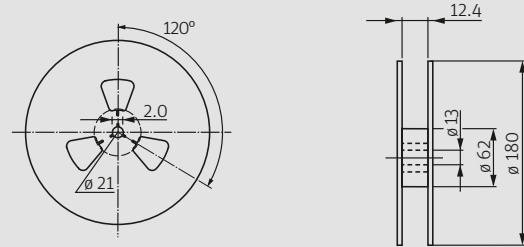
Oscillator JT53C · TCXO

TAPING SPECIFICATION



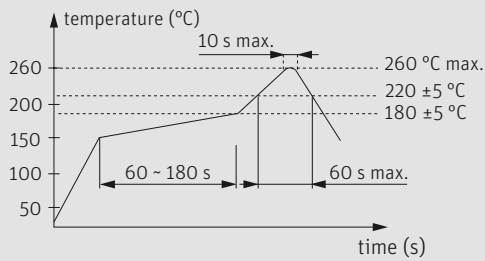
500 pcs per reel

Direction of feed →



in mm

REFLOW SOLDERING PROFILE



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

MARKING

frequency

company 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

PACKAGING NOTE

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