



actual size

# Oscillator J053 · 5.0 V

- SMD Oscillator with Stop Function · 5.0 x 3.2 mm
- HCMOS compatible output
- Low phase jitter, no PLL
- Seam sealed ceramic/metal package



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA		
TYPE	J053 5.0 V	
frequency range	0.50 ~ 110.0 MHz (15 pF max.)	
	0.50 ~ 50.0 MHz (30 pF max.)	
frequency stability over all*	± 20 ppm ~ ± 100 ppm (table 1)	
current consumption	see table 2	
supply voltage V <sub>DC</sub>	5.0 V ± 10 % for stability A, B, G	
	5.0 V ± 5 % for stability C, D	
temperature	operating	-10°C ~ +70°C / -40°C ~ +85°C
	storage	-55°C ~ +125°C
output	rise & fall time	see table 3
	load max.	15 pF / 30 pF
	current max.	8 mA
	low level max.	0.1 x V <sub>DC</sub>
	high level min.	0.9 x V <sub>DC</sub>
output enable time max.	10 ms	
output disable time max.	100 ns	
start-up time max.	10 ms	
standby function	stop	
standby current max.	10 µA	
phase jitter 12 kHz ~ 20.0 MHz	< 1.0 ps RMS	
symmetry at 0.5 x V <sub>DC</sub>	45% ~ 55% typ. (40% ~ 60% max.)	

TABLE 1: FREQUENCY STABILITY CODE					
stability code	A	B	G	C	D
	± 100 ppm		±50 ppm	± 30 ppm	± 25 ppm
-10°C ~ +70°C		◇	○	○	△
-40°C ~ +85°C	◇	◇	○	○	

◇ standard ○ available △ excludes aging

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

TABLE 2: CURRENT CONSUMPTION MAX.			
Current at 15 pF load:		Current at 30 pF load:	
0.5 ~ 14.9 MHz	10 mA	0.5 ~ 14.9 MHz	15 mA
15.0 ~ 29.9 MHz	15 mA	15.0 ~ 29.9 MHz	20 mA
30.0 ~ 39.9 MHz	25 mA	30.0 ~ 50.0 MHz	40 mA
40.0 ~ 49.9 MHz	35 mA		
50.0 ~ 59.9 MHz	40 mA		
60.0 ~ 79.9 MHz	45 mA		
80.0 ~ 110.0 MHz	50 mA		

TABLE 3: RISE & FALL TIME MAX.		note:
6 ns: 0.50 ~ 1.79 MHz		
5 ns: 1.80 ~ 49.99 MHz		
4 ns: 50.00 ~ 110.00 MHz		- specific data on request - rise time: 0.1 V <sub>DC</sub> ~ 0.9 V <sub>DC</sub> - fall time: 0.9 V <sub>DC</sub> ~ 0.1 V <sub>DC</sub>

### DIMENSIONS

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

# 1: e/d  
# 2: ground  
# 3: output  
# 4: V<sub>DC</sub>

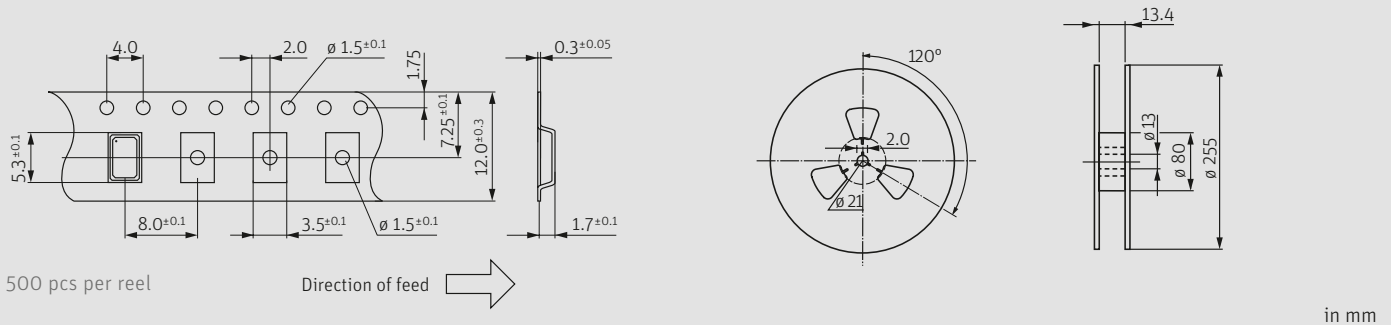
### ORDER INFORMATION

0	frequency	type	frequency stability code	supply voltage code	output load code	option
Oscillator	0.5 ~ 110.0 MHz	J053	see table 1	5.0 = 5.0 V	1 = 15 pF 2 = 30 pF	blank = -10°C ~ +70°C T1 = -40°C ~ +85°C

**Example: 0 20.0-J053-B-5.0-1-T1-LF** (Suffix LF = RoHS compliant / Pb free)

# Oscillator J053 · 5.0 V · Stop Function

## TAPING SPECIFICATION



## ENABLE / DISABLE FUNCTION

pin #1 (e/d control)	pin #3 (output)
open	active
high "1" ( $V_{IH} \geq 0.8 V_{DC}$ )	active
low "0" ( $V_{IL} \leq 0.2 V_{DC}$ )	high impedance

### stop function:

- oscillator stops
- output high impedance

## MARKING

### frequency

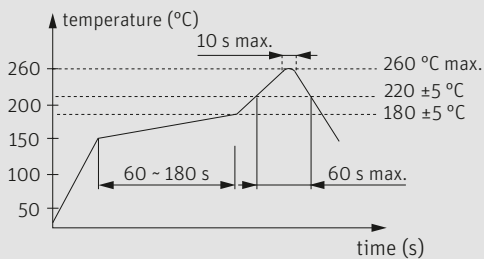
### company stability code / voltage data code

data 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

## REFLOW SOLDERING PROFILE



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

## PACKAGING NOTE

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