



actual size

SMD Quartz Crystal · JXS53

- 4 pad version, 5.0 x 3.2 mm
- seam sealed ceramic/metal package
- extended temperature ranges available
- high mechanical reliability type available
- for automotive type, see automotive datasheet



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA	
TYPE	JXS53
frequency range	8.0 ~ 56.0 MHz (fund. AT-cut) 50.0 ~ 125.0 MHz (3rd OT AT-cut)
frequency tolerance at 25 °C	± 10 ppm / ± 30 ppm / ± 50 ppm
load capacitance C_L	12 pF standard (option 8 pF ~ 32 pF / series)
shunt capacitance C_0	< 7 pF
storage temperature	-40 °C ~ +125 °C
drive level max.	100 µW
aging	< ± 3 ppm first year (option: < ± 1 ppm first year for tol. ± 10 ppm)

ESR (SERIES RESISTANCE RS)			
frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
8.0 ~ 9.999	fund. - AT	100	50
10.0 ~ 10.999	fund. - AT	50	30
11.0 ~ 11.999	fund. - AT	40	25
12.0 ~ 21.999	fund. - AT	40	20
22.0 ~ 24.999	fund. - AT	40	15
25.0 ~ 49.999	fund. - AT	30	15
50.0 ~ 56.000	fund. - AT	40	20
50.0 ~ 79.999	3rd OT - AT	100	60
80.0 ~ 125.000	3rd OT - AT	80	60

TABLE 1: FREQUENCY STABILITY VS. TEMPERATURE							
		± 10 ppm	± 15 ppm	± 20 ppm	± 30 ppm	± 50 ppm	± 100 ppm
-20 °C ~ +70 °C	STD.	○	○	○	○	○	○
-40 °C ~ +85 °C	T1		○	○	○	○	○
-40 °C ~ +105 °C	T2				○	○	○
-40 °C ~ +125 °C	T3					○	○

MARKING						
frequency with load capacitance code						
company code / date code / internal code						
date code: year/month; A ~ M: Jan. - Dec.; example: 8A = 2018 January						
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	

DIMENSIONS

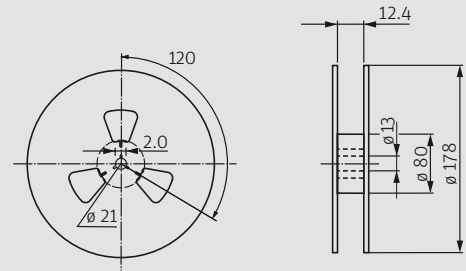
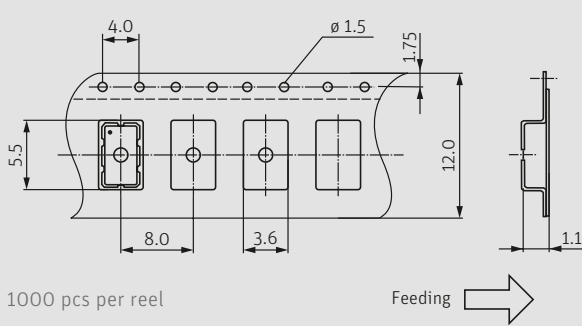
top view side view bottom view #2-#4: connected to lid preferably connect to GND crystal connection pad layout in mm

ORDER INFORMATION						
Q	frequency	type	load capacitance	tolerance at 25 °C	stability vs. temp. range	option
Quartz	8.0 ~ 125.0 MHz	JXS53	12 pF standard 8 pF ~ 32 pF available S for series	10 = ± 10 ppm 30 = ± 30 ppm 50 = ± 50 ppm	10 = ± 10 ppm 15 = ± 15 ppm 20 = ± 20 ppm 30 = ± 30 ppm 50 = ± 50 ppm 100 = ± 100 ppm	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C T3 = -40 °C ~ +125 °C FU = for fundamental frequencies ≥ 20 MHz 3OT = 3rd overtone HMR = high mechanical reliability (3000g/half sine wave/0.3ms)

Example: Q 30.0-JXS53-12-30/30-FU-LF (Suffix LF = RoHS compliant / Pb free)

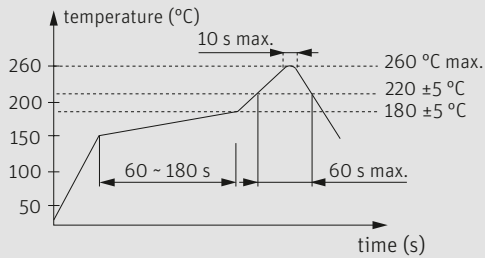
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TAPING SPECIFICATION



in mm

REFLOW SOLDERING PROFILE



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

LOAD CAPACITANCE CODES

8 pF: k	14 pF: x	22 pF: g	series: s
9 pF: n	15 pF: j	24 pF: d	T: 3rd OT
10 pF: h	16 pF: b	25 pF: r	
11 pF: l	17 pF: t	27 pF: w	
12 pF: a	18 pF: f	30 pF: .	
13 pF: v	20 pF: c		

example 20.0 MHz / 12 pF: 20a00