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 2002/95/EC — RoHS compliant

Pb free: pins / pads

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

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						○

○ available

Marking

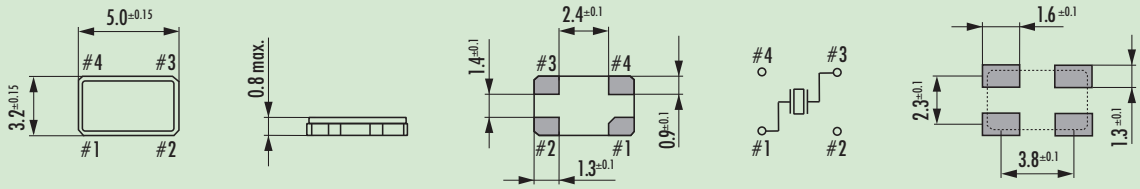
frequency with load capacitance code
company code / date code / internal code

date code: year/month
example: 2A = 2012 January

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 crystal connection — pad layout — in mm

Order Information

Q	frequency	–	type	–	load capacitance	–	stability at 25 °C	/	stability vs. temp. range	–	option
Quartz	8.0 ~ 125.0 MHz		JXS53		12 pF standard 8 pF ~ 30 pF 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 pins or pads)

Jauch Quartz GmbH • e-mail: info@jauch.de
full data can be found under: www.jauch.de / www.jauch.co.uk / www.jauch.fr / www.jauchusa.com

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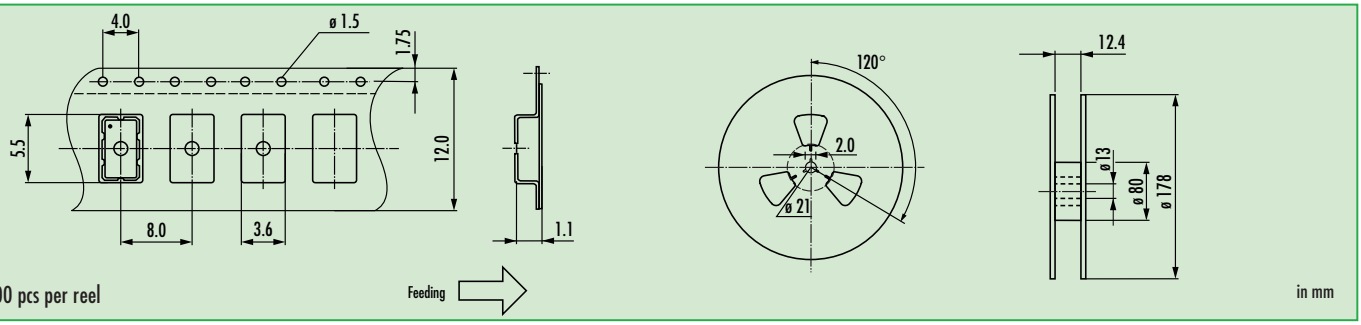
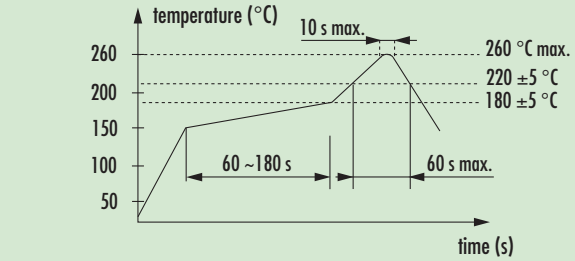
Taping Specification



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