



actual size

SMD Quartz Crystal · JXS21

4 Pad Version · 2.0 x 1.6 mm

- ± 10 ppm type available
- EMI shielding possible by grounded lid
- reflow soldering temperature: 260 °C max.
- ceramic / metal package



General Data

type	JXS21
frequency range	20.0 ~ 50.0 MHz (fund. AT-cut)
frequency tolerance at 25 °C	± 10 ppm / ± 20 ppm / ± 30 ppm
load capacitance C_L	12 pF standard (option: 8 pF ~ 30 pF / series)
shunt capacitance C_0	< 5 pF
storage temperature	-40 °C ~ +90 °C
drive level max.	100 µW (10 µW recommended)
aging	< ± 3 ppm first year (< ± 1 ppm for tol. ± 10 ppm)

ESR (series resistance Rs)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
20.0 ~ 23.999	fund. - AT	150	120
24.0 ~ 29.999	fund. - AT	100	70
30.0 ~ 35.999	fund. - AT	80	50
36.0 ~ 50.000	fund. - AT	60	40

Frequency Stability vs. Temperature

		± 15 ppm	± 20 ppm	± 30 ppm	± 50 ppm	
-20 °C ~ +70 °C	STD.	○	○	●	○	
-40 °C ~ +85 °C	T1		○	○	○	

● standard
 ○ available

Marking

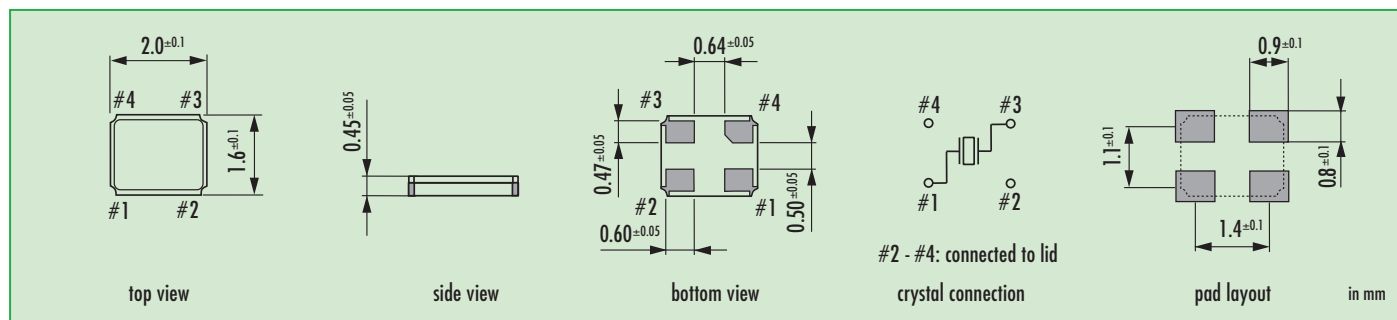
frequency with load capacitance code
company code / date code / internal code

date code: year/month

example: 8A = 2008 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



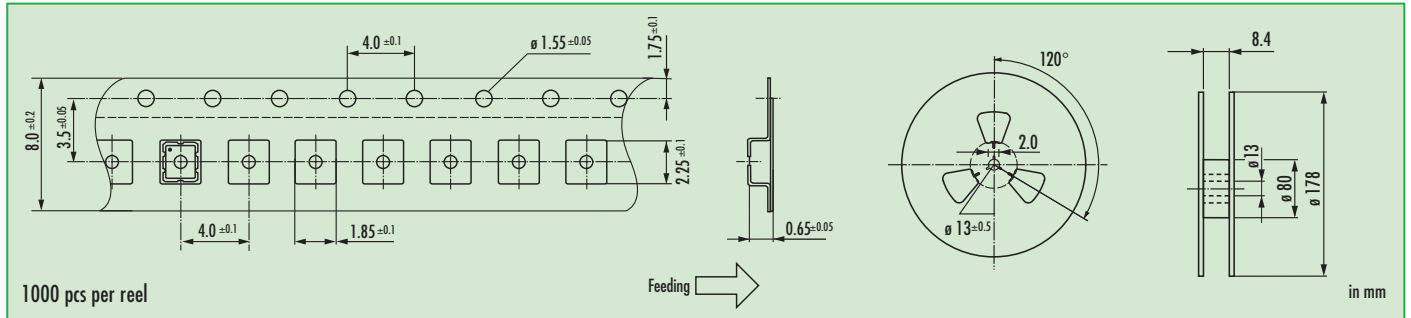
Order Information

Q	frequency	type	load capacitance	stability at 25 °C	stability vs. temp. range	option
Quartz	20.0 ~ 50.0 MHz	JXS21	12 pF standard 8 pF ~ 30 pF S for series	10 ± 10 ppm 20 ± 20 ppm 30 ± 30 ppm	see table	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C FU = for fundamental frequencies ≥ 20 MHz

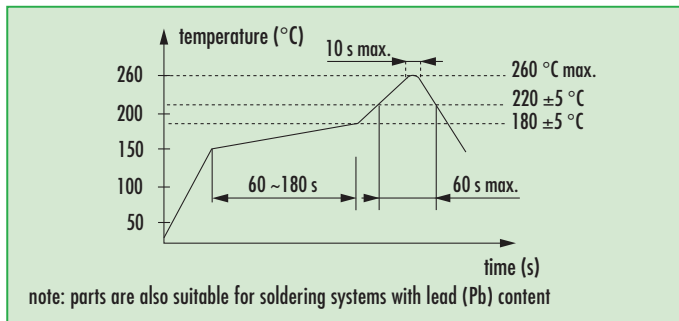
Example: Q 28.0-JXS21-12-30/30-FU (Suffix LF = RoHS compliant / Pb free pins or pads)

SMD Quartz Crystal · JXS21

Taping Specification



Reflow Soldering Profile



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