



actual size

# SMD Quartz Crystal · JXS22

4 Pad Version · 2.5 x 2.0 mm

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



## General Data

type	JXS22	
frequency range	16.0 ~ 50.0 MHz	(fund. AT-cut)
frequency tolerance at 25 °C	± 10 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
16.0 ~ 18.999	fund. - AT	80	50
19.0 ~ 21.999	fund. - AT	80	40
22.0 ~ 24.999	fund. - AT	70	35
25.0 ~ 29.999	fund. - AT	60	30
30.0 ~ 39.999	fund. - AT	50	25
40.0 ~ 50.000	fund. - AT	50	20

## Frequency Stability vs. Temperature

		± 10 ppm	± 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

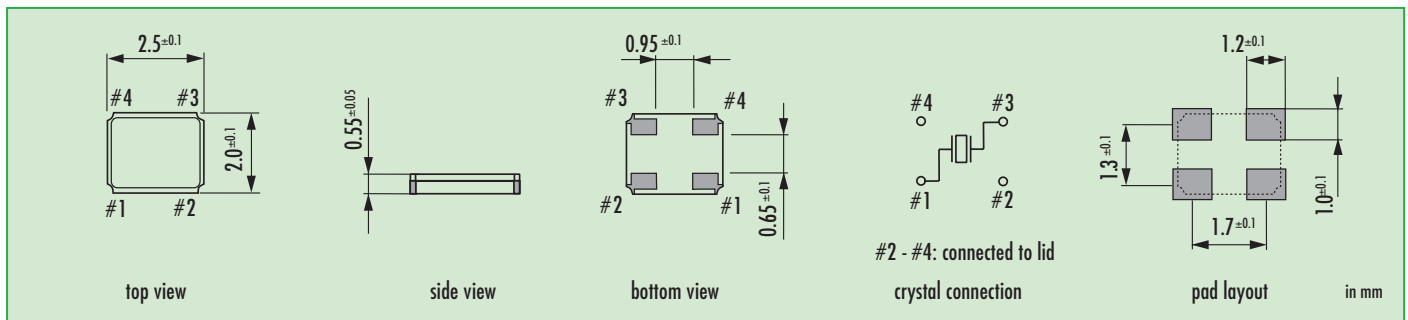
date code: year/month

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



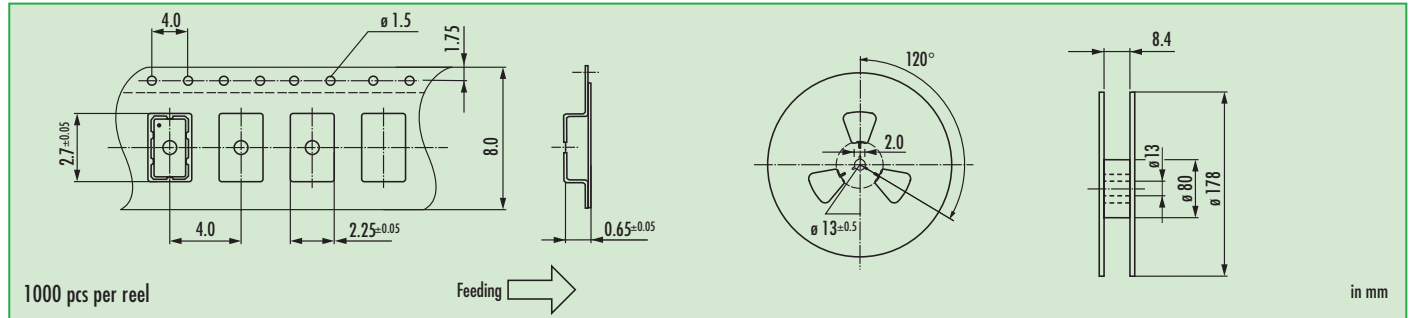
## Order Information

Q	frequency	type	load capacitance	stability at 25 °C	stability vs. temp. range	option
Quartz	16.0 ~ 50.0 MHz	JXS22	12 pF standard 8 pF ~ 30 pF S for series	10 = ± 10 ppm 30 = ± 30 ppm	see table	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C FU = for fundamental frequencies ≥ 20 MHz

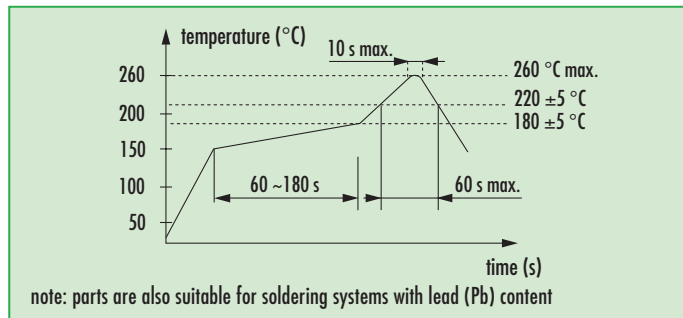
Example: Q 28.0-JXS22-12-30/30-FU (Suffix LF = RoHS compliant / Pb free pins or pads)

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## 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