



actual size

Automotive SMD Crystal · JXS22P4

4 Pad Version · 2.5 x 2.0 mm

- seam sealed ceramic/metal package
- all versions are AEC-Q200 qualified
- HMR version with extended shock & vibration immunity
- reflow soldering temperature: 260 °C max.



General Data

type	JXS22P4
frequency range	12.0 ~ 40.0 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 ~ 30.0 pF / series)
shunt capacitance C_0	< 5 pF
storage temperature	-40 °C ~ +125 °C
shock resistance	> 100 g (half sine pulse, 6.0 ms)*
drive level max.	100 μ W (10 μ W recommended)
aging	< ± 3 ppm first year (< ± 1 ppm for tol. ± 10 ppm)

* optional HMR version: 3000G / half sine pulse / 0.3 ms

ESR (series resistance R_s)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
12.0 ~ 12.999	fund. - AT	150	120
13.0 ~ 15.999	fund. - AT	150	100
16.0 ~ 17.999	fund. - AT	80	50
18.0 ~ 19.999	fund. - AT	80	40
20.0 ~ 24.999	fund. - AT	60	35
25.0 ~ 29.999	fund. - AT	60	30
30.0 ~ 34.999	fund. - AT	50	25
35.0 ~ 40.000	fund. - AT	40	20

Frequency Stability vs. Temperature

		± 15 ppm	± 20 ppm	± 30 ppm	± 50 ppm	± 100 ppm
-20 °C ~ +70 °C		D	D	D	D	D
-40 °C ~ +85 °C	T1	D	○	○	○	○
-40 °C ~ +105 °C	T2				D	○
-40 °C ~ +125 °C	T3				D	○

○ available
D ask if available

Marking

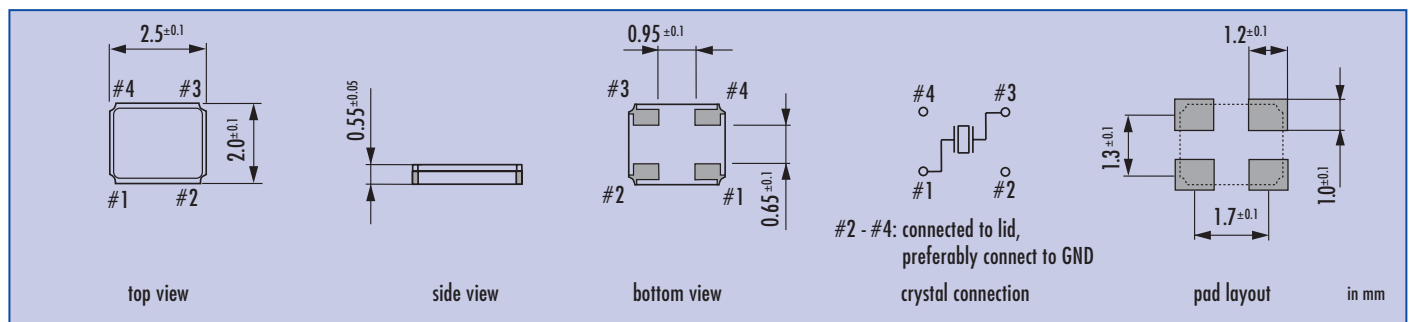
frequency with load capacitance code
company code / date code / internal code

date code: year/month
example: 6A = 2016 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 1	option 2
Quartz	12.0 ~ 40.0 MHz	JXS22	12 pF standard 10 pF ~ 30 pF S for series	10 ± 10 ppm 30 ± 30 ppm 50 ± 50 ppm	see table	blank = -20 °C ~ +70 °C T (-30/+85) = -30 °C ~ +85 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C T3 = -40 °C ~ +125 °C FU = for fundamental frequencies ≥ 20 MHz	AEC = AEC-Q200 qualified HMR = high mechanical reliability (3000g/half sine wave/0.3ms)

Example: Q 30.0-JXS22P4-12-30/50-T2-FU-AEC-LF (Suffix LF = RoHS compliant / Pb free pads)

