



actual size

# Automotive SMD Crystal · JXS21P4

4 Pad Version · 2.0 x 1.6 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	JXS21P4
frequency range	16.0 ~ 40.0 MHz (fund. AT-cut)
frequency tolerance at 25 °C	± 10 ppm, ± 20 ppm, ± 30 ppm
load capacitance $C_L$	8 pF / 10 pF / 12 pF standard (option: 6 pF ~ 16 pF / series)
shunt capacitance $C_0$	< 5 pF
storage temperature	-40 °C ~ +125 °C (T2, T3) / -40 °C ~ +85 °C (T1)
shock resistance	> 100 g (half sine pulse, 6.0 ms)*
drive level max.	100 $\mu$ W (10 $\mu$ 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 $\Omega$	ESR typ. in $\Omega$
16.0 ~ 19.999	fund. - AT	150	120
20.0 ~ 29.999	fund. - AT	100	70
30.0 ~ 35.999	fund. - AT	80	50
36.0 ~ 40.000	fund. - AT	60	40

## Frequency Stability vs. Temperature

		± 15 ppm	± 20 ppm	± 25 ppm	± 30 ppm	± 50 ppm	± 100 ppm
-20 °C ~ +70 °C		D	D	O	D	D	D
-40 °C ~ +85 °C	T1	D	O	O	O	O	O
-40 °C ~ +105 °C	T2			D	O	O	O
-40 °C ~ +125 °C	T3					D	O

O available  
D ask if available

## Marking

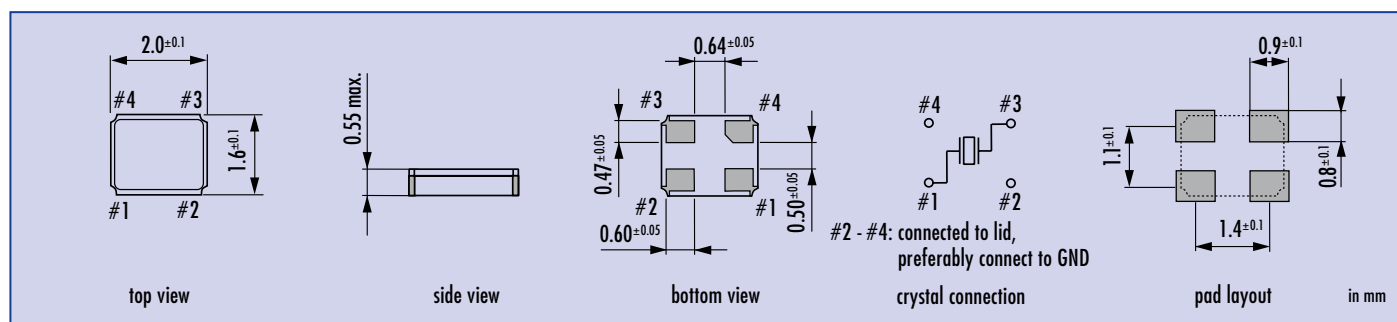
frequency with load capacitance code  
company code / date code / internal code

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	16.0 ~ 40.0 MHz	JXS21P4	8/10/12 pF std. 6 pF ~ 16pF S for series	10 = ± 10 ppm 20 = ± 20 ppm 25 = ± 25 ppm 50 = ± 50 ppm 100 = ± 100 ppm	see table	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	AEC = AEC-Q200 qualified HMR = high mechanical reliability (3000g/half sine wave/0.3ms)

Example: Q 26.0-JXS21P4-12-30/50-T2-FU-LF (Suffix LF = RoHS compliant / Pb free pads)