



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



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA

TYPE	JXS22P4 Automotive
frequency range	12.0 ~ 54.0 MHz (fund. AT-cut)
frequency tolerance at 25 °C	±10 ppm, ±20 ppm, ±30 ppm
load capacitance C_L	12 pF standard (option: 6 pF ~ 30.0 pF / series)
shunt capacitance C_0	< 3 pF
storage temperature	-40 °C ~ +125 °C
shock resistance	> 100 g (half sine pulse, 6.0 ms)*
drive level max.	100 µW (10 µW recommended)
aging max.	< ±3 ppm 1 st year (option ± 1 ppm if tol. ± 10 ppm)

* optional HMR version: 3000G / half sine pulse / 0,3 ms

TABLE 1: FREQUENCY STABILITY VS. TEMPERATURE

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

○ available △ ask if available

DIMENSIONS

top view side view bottom view pad layout

#2-#4: connected to lid, preferably connect to GND crystal connection

in mm

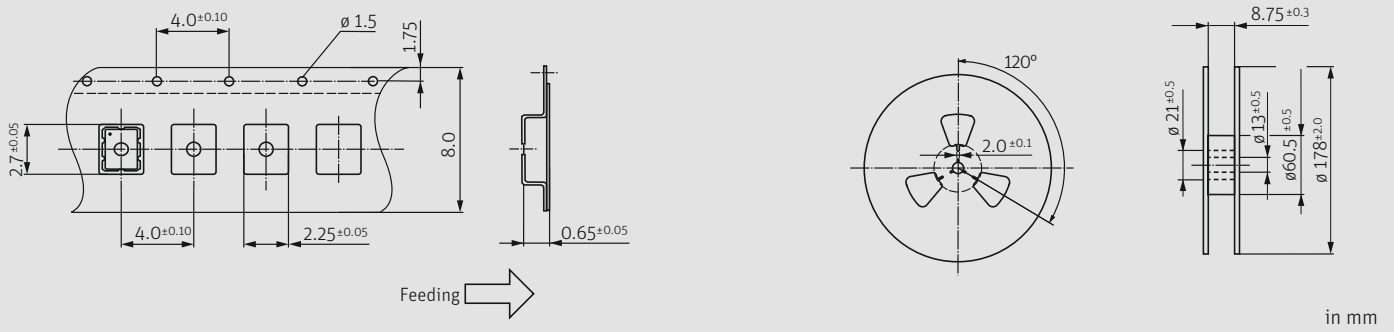
ORDER INFORMATION

Q	frequency	type	load capacitance	tolerance at 25 °C	stability vs. temp. range	option 1	option 2
Quartz	12.0 ~ 54.0 MHz	JXS22P4	12 pF standard 6 pF ~ 30 pF option S for series	10 = ±10 ppm 20 = ±20 ppm 30 = ±30 ppm	see table 1	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)

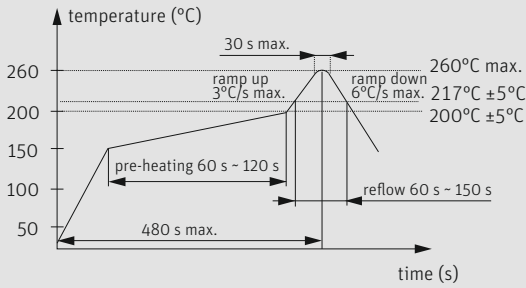
Example: Q 30.0-JXS22P4-12-30/50-T2-FU-AEC-LF (Suffix LF = RoHS compliant / Pb free)

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TAPING SPECIFICATION



REFLOW SOLDERING PROFILE



note: parts are also suitable for soldering systems with lead (Pb) content

LOAD CAPACITANCE CODES

6 pF: q	12 pF: a	18 pF: f	27 pF: h
7 pF: m	13 pF: v	20 pF: c	30 pF: .
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		

example 20.0 MHz / 8 pF: 20k00