



actual size

# SMD Quartz Crystal · JXS11

- 4 Pad Version, 1.6 x 1.2 mm
- ± 10 ppm type available
- EMI shielding possible by grounded lid
- reflow soldering temperature: 260 °C max.
- ceramic / metal package



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

## GENERAL DATA

TYPE	JXS11
frequency range	24.0 ~ 60.0 MHz (fund. AT-cut)
frequency tolerance at 25 °C	± 10 ppm / ± 20 ppm / ± 30 ppm
load capacitance $C_L$	8 pF standard (option: 6 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 (option: < ± 1 ppm first year for tol. ± 10 ppm)

TABLE 1: FREQUENCY STABILITY VS. TEMPERATURE

		± 10 ppm	± 15 ppm	± 20 ppm	± 30 ppm	± 50 ppm
-20 °C ~ +70 °C	STD.	○	○	○	○	○
-30 °C ~ +85 °C	T(-30/+85)		○	○	○	○
-40 °C ~ +85 °C	T1			○	○	○

○ available

## ESR (SERIES RESISTANCE RS)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
24.0 ~ 25.999	fund. AT	90	60
26.0 ~ 29.999	fund. AT	90	55
30.0 ~ 39.999	fund. AT	80	50
40.0 ~ 60.000	fund. AT	60	40

## MARKING

frequency with load capacitance code  
company code / date code

date code: year/month; A ~ M: Jan. - Dec.; example: 8A = 2018 January  
7: 2017    8: 2018    9: 2019    0: 2020    1: 2021    2: 2022

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

top view      side view      bottom view      crystal connection      pad layout      in mm

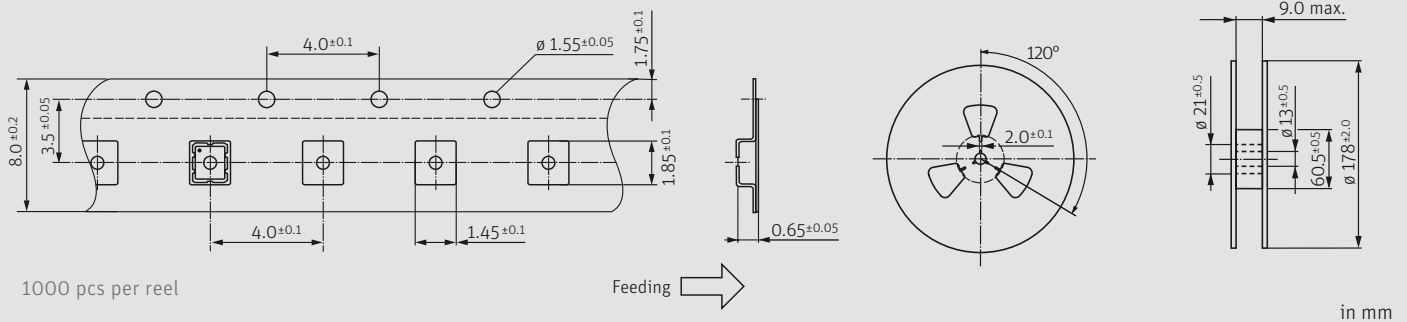
## ORDER INFORMATION

Q	frequency	type	load capacitance	tolerance at 25 °C	stability vs. temp. range	option
Quartz	24.0 ~ 60.0 MHz	JXS11	8 pF standard 6 pF ~ 30 pF available S for series	10 = ± 10 ppm 20 = ± 20 ppm 30 = ± 30 ppm	10 = ± 10 ppm 15 = ± 15 ppm 20 = ± 20 ppm 30 = ± 30 ppm 50 = ± 50 ppm	blank = -20 °C ~ +70 °C T1 = -40 °C ~ +85 °C T(-30/+85) = -30 °C ~ +85 °C FU = for fundamental frequencies ≥ 20 MHz

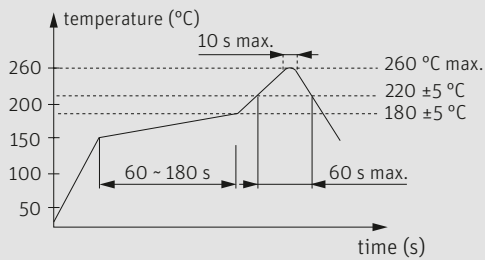
**Example: Q 32.0-JXS11-12-30/30-FU-LF** (Suffix LF = RoHS compliant / Pb free)

# SMD Quartz Crystal · JXS11

## TAPING SPECIFICATION



## REFLOW SOLDERING PROFILE



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

## LOAD CAPACITANCE CODES

8 pF: k	14 pF: x	22 pF: g	series: s
9 pF: n	15 pF: j	24 pF: d	
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 36.0 MHz / 12 pF: 36a0