

actual size

# SMD Quartz Crystal · JXS21-WA

for wireless applications · 2.0 x 1.6 mm

- perfect reference crystal for wireless applications
- for IoT using BlueTooth, ZigBee, NFC and more
- high frequency stability and low ESR
- metal lid allows EMI shielding



## General Data

type	JXS21-WA
special frequencies for wireless applications	14 standard frequencies shown in ESR list (for other frequencies refer to general JXS21 datasheet)
frequency tolerance at 25 °C	± 10ppm *
load capacitance $C_L$	8pF / 10pF / 12 pF *
shunt capacitance $C_0$	< 3 pF
storage temperature	-40 °C ~ +105 °C
drive level max.	100 µW (10 µW recommended)
aging	< ± 1 ppm first year

\* for different specs please ask for availability

## ESR (series resistance $R_s$ )

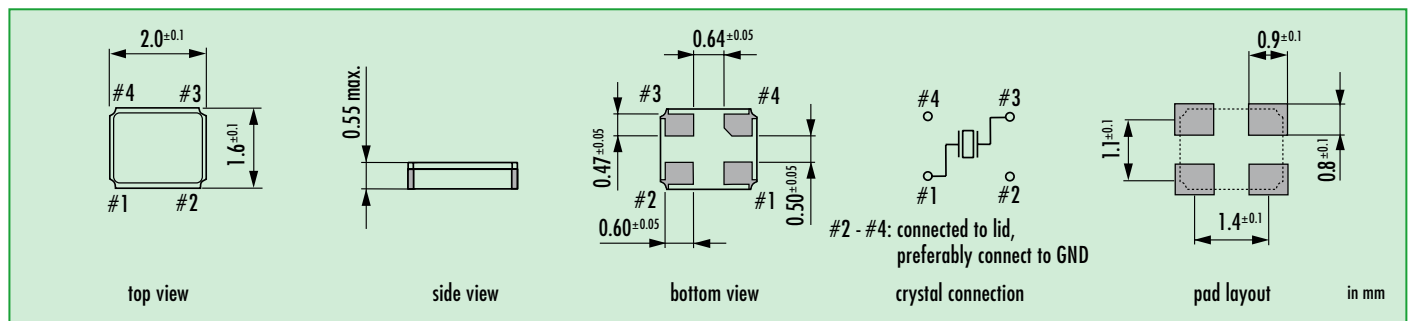
frequency in MHz	vibration mode	ESR max. in $\Omega$	ESR typ. in $\Omega$
16.0	fund. - AT	120	80
19.20	fund. - AT	120	80
20.0	fund. - AT	100	60
24.0	fund. - AT	80	40
25.0	fund. - AT	60	30
26.0	fund. - AT	60	25
27.120	fund. - AT	60	25
30.0	fund. - AT	60	25
32.0	fund. - AT	50	25
37.40	fund. - AT	50	25
38.40	fund. - AT	50	25
40.0	fund. - AT	50	25
48.0	fund. - AT	50	20
52.0	fund. - AT	50	20

## Frequency Stability vs. Temperature

		± 10 ppm	± 13 ppm	± 15 ppm	± 20 ppm	± 25 ppm	± 30 ppm
-20 °C ~ +70 °C	STD.	●		○	○	○	○
-30 °C ~ +85 °C	T(-30/+85)		○	○	○	○	○
-40 °C ~ +85 °C	T1		D	●	○	○	○
-40 °C ~ +105 °C	T2					D	●

● standard ○ available D ask if available

## Dimensions



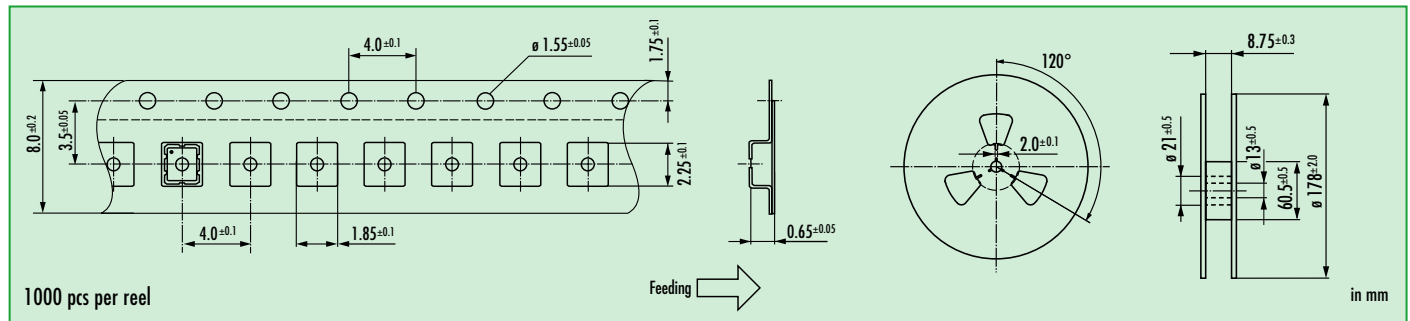
## Order Information

Q	frequency	type	load capacitance	tolerance at 25 °C	stability vs. temp. range	option 1	option 2
Quartz	see frequencies in ESR list	JXS21	8 / 10 / 12 pF	10 = ± 10ppm std.	10 = ± 10 ppm 13 = ± 13 ppm 15 = ± 15 ppm 20 = ± 20 ppm 25 = ± 25 ppm 30 = ± 30 ppm	blank = -20 °C ~ +70 °C T(-30/+85) = -30 °C ~ +85 °C T1 = -40 °C ~ +85 °C T2 = -40 °C ~ +105 °C FU = for fundamental frequencies ≥ 20 MHz	WA = for wireless application

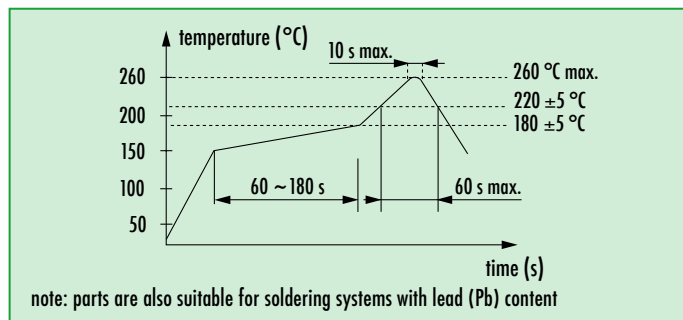
Example: Q 26.0-JXS21-12-10/15-T1-FU-WA-LF (Suffix LF = RoHS compliant / Pb free pins or pads)

# SMD Quartz Crystal · JXS21-WA

## 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

\* hand soldering temperature should not exceed 280 °C

## 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