



■ actual size

SMD Quartz Crystal · J21SMX

- low cost crystal in 2016 seam sealed package
- many standard frequencies
- 4 Pad Version, 2.0 x 1.6 mm
- industrial temperature range available



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA

TYPE	J21SMX
frequency range	16.0 ~ 48.0 MHz (fund. AT-cut)
frequency tolerance at 25 °C	± 10 ppm / ± 30 ppm
load capacitance C_L	6 pF / 8 pF / 10 pF standard (option: 7 pF / 9 pF / 12 pF)
shunt capacitance C_0	< 3 pF
storage temperature	-40 °C ~ +125 °C
drive level max.	100 µW (10 µW recommended)
aging	< ± 3 ppm first year

TABLE 1: FREQUENCY STABILITY VS. TEMPERATURE

		± 15 ppm	± 20 ppm	± 30 ppm	± 50 ppm
		E	D	G	B
-20 °C ~ +70 °C	C	○	○	○	
-40 °C ~ +85 °C	I		○	○	○

○ available

ESR (SERIES RESISTANCE RS)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
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 ~ 48.000	fund. - AT	50	40

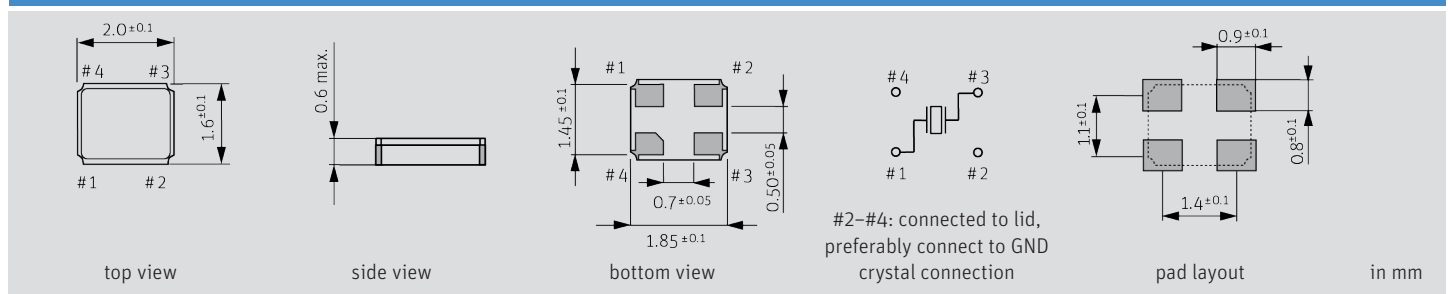
MARKING

frequency with load capacitance code
company code / date code / internal code (optional)

date code: year/month; A ~ M: Jan. - Dec.; example: 5A = 2025 January
5: 2025 6: 2026 7: 2027 8: 2028 9: 2029 0: 2030

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



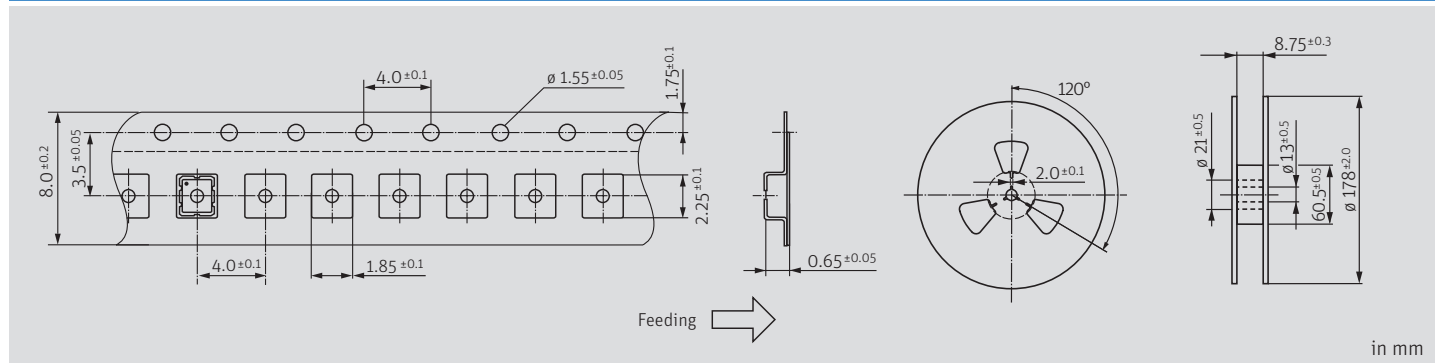
ORDER INFORMATION

type	load capacitance	tolerance at 25 °C	stability vs. temp. range	temperature code	frequency
J21SMX	Q = 6 pF std. M = 7 pF K = 8 pF std. N = 9 pF H = 10 pF std. A = 12 pF	F = ± 10 ppm G = ± 30 ppm	E = ± 15 ppm D = ± 20 ppm G = ± 30 ppm B = ± 50 ppm	C = -20 °C ~ +70 °C I = -40 °C ~ +85 °C	16.0 ~ 48.0 MHz

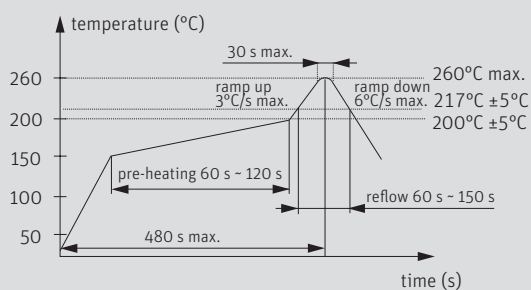
Ordering example: J21SMX-K-F-D-I-20M0 J21SMX, 8pF load capacitance, ± 10 ppm freq. tolerance, ± 20 ppm freq. stability, -40 °C ~ +85 °C operating temp., 20.0 MHz

SMD Quartz Crystal · J21SMX · 2016 seam sealed

TAPING SPECIFICATION



REFLOW SOLDERING PROFILE



LOAD CAPACITANCE CODES

6 pF: q
7 pF: m
8 pF: k
9 pF: n
10 pF: h
12 pF: a

example 16.0 MHz / 8 pF: 16k0

* hand soldering temperature should not exceed 280 °C

STANDARD FREQUENCIES

16.0 / 24.0 / 25.0 / 27.0 / 32.0 / 40.0 / 48.0 MHz (fund. AT-cut)
other frequencies available case-by-case, please contact Jauch sales