



actual size

SMD Quartz Crystal · J49SMH

- 2 pad version, 11.5 x 4.8 mm
- low cost SMD type
- reflow soldering temperature: 260 °C max.
- package height 4.0 mm max.



RoHS compliant



Pb free



REACH compliant



Conflict mineral free

GENERAL DATA

TYPE	J49SMH	
frequency range	fund. AT-cut	4.0 MHz
		8.0 MHz
		12.0 MHz
		16.0 MHz
		20.0 MHz
		24.0 MHz
frequency tolerance at 25 °C	±30 ppm	
load capacitance C_L	12 pF / 18 pF / 30 pF	
shunt capacitance C_0	< 5 pF	
storage temperature	-40 °C ~ +125 °C	
drive level max.	500 µW (100 µW recommended)	
aging	< ±5 ppm first year	

ESR (SERIES RESISTANCE RS)

frequency in MHz	vibration mode	ESR max. in Ω	ESR typ. in Ω
4.0 MHz	fund. - AT	80	60
8.0 MHz	fund. - AT	50	25
12.0 MHz	fund. - AT	35	15
16.0 MHz	fund. - AT	30	10
20.0 MHz	fund. - AT	30	10
24.0 MHz	fund. - AT	30	10
25.0 MHz	fund. - AT	30	10

FREQUENCY STABILITY VS. TEMPERATURE

Stability code

G
±30 ppm

LOAD CAPACITANCE CODES

12 pF : **A**
18 pF : **F**
30 pF : **P**

FREQUENCY TOLERANCE

Frequency tolerance code

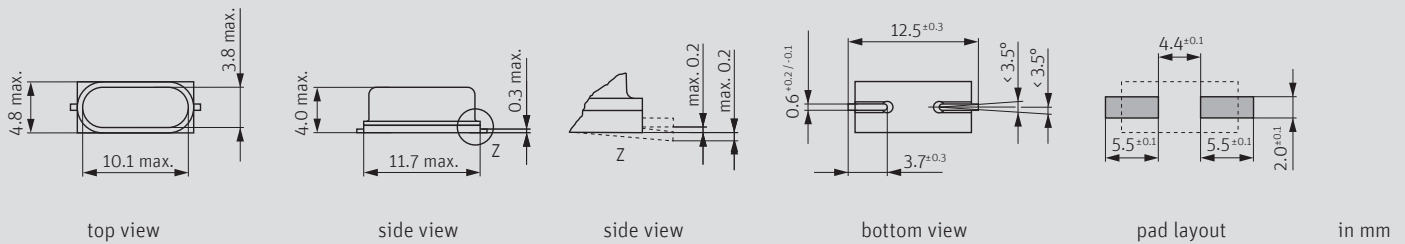
G
±30 ppm

OPERATING TEMPERATURE

Operating temperature code

K
-40°C - +85°C

DIMENSIONS



ORDER INFORMATION

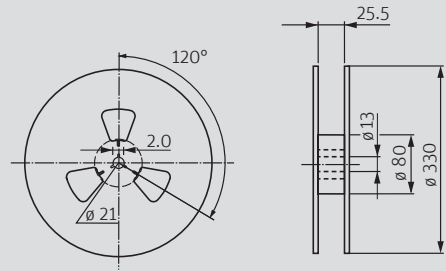
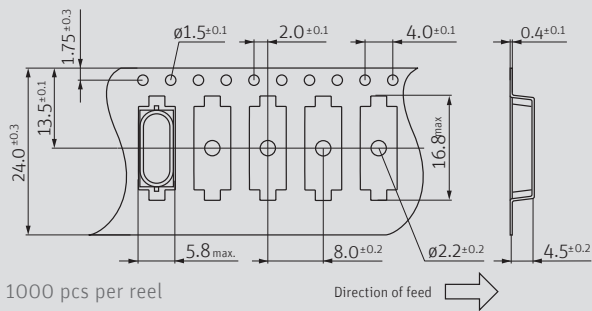
J49SMH-A-G-G-K-4MO	J49SMH-P-G-G-K-12MO	J49SMH-F-G-G-K-24MO
J49SMH-F-G-G-K-4MO	J49SMH-A-G-G-K-16MO	J49SMH-P-G-G-K-24MO
J49SMH-P-G-G-K-4MO	J49SMH-F-G-G-K-16MO	J49SMH-A-G-G-K-25MO
J49SMH-A-G-G-K-8MO	J49SMH-P-G-G-K-16MO	J49SMH-F-G-G-K-25MO
J49SMH-F-G-G-K-8MO	J49SMH-A-G-G-K-20MO	J49SMH-P-G-G-K-25MO
J49SMH-P-G-G-K-8MO	J49SMH-F-G-G-K-20MO	
J49SMH-A-G-G-K-12MO	J49SMH-P-G-G-K-20MO	
J49SMH-F-G-G-K-12MO	J49SMH-A-G-G-K-24MO	

Ordering example:

J49SMH-A-G-G-K-4MO J49SMH, 12pF Load Capacitance, 30ppm Freq tolerance, 30ppm Freq stability, -40-85 operating temp, 4MHz

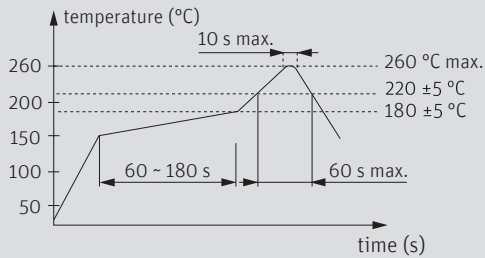
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TAPING SPECIFICATION



in mm

REFLOW SOLDERING PROFILE



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

MARKING

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

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.
2019	a	b	c	d	e	f	g	h	j	k	l	m
2020	n	p	q	r	s	t	u	v	w	x	y	z
2021	A	B	C	D	E	F	G	H	J	K	L	M
2022	N	P	Q	R	S	T	U	V	W	X	Y	Z