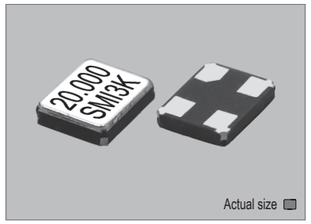
21SMX

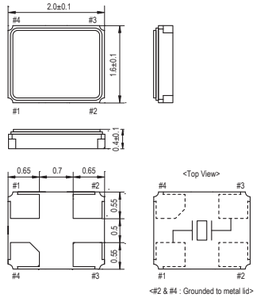
STANDARD SMD CRYSTALS

21SMX

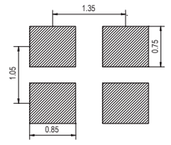


0.00568 gm (wt.)

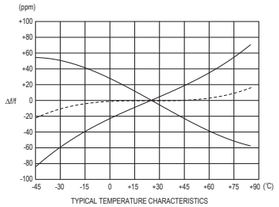
21SMX



SOLDERING PATTERN

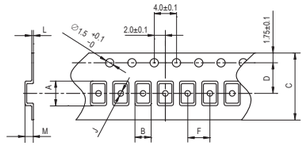


AT-CUT



TYPICAL TEMPERATURE CHARACTERISTICS

TAPE SPECIFICATIONS



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
2.25	1.85	8.0	3.5	4.0	1.05	0.25	0.65	180	3000pcs (1000pcs)

STANDARD SPECIFICATIONS

Item	Specifications
Package type	21SMX
Frequency range	20.000 MHz to 80.000 MHz
Frequency tolerance	±30 ppm at +25˚C ±3˚C
Temperature stability (referred to +25˚C)	±30 ppm over −20˚C to +70˚C
Load capacitance (CL)	8 pF, Typical
Shunt capacitance (C0)	5 pF max.
Drive level (P)	100 µW max. (10 µW for testing)
Aging	±5 ppm max. at +25˚C ±3˚C per year
Cut / Oscillation mode	AT-Cut / Fundamental
Reflow condition	10 seconds max. at +250˚C ±10˚C

PART NUMBERING GUIDE

21 M 400 - 8

- 21 — Package type
- M — Circuit calibration condition
- 400 — Frequency designator
- 8 — Load capacitance (CL)

Example

SMI Part No.	Package	Circuit Calibration Condition	Frequency
21M400-8	21 = 21SMX	M = Parallel resonance CL= 8 pF	400 = 40.000 MHz
21S270	21 = 21SMX	S = Series resonance	270 = 27.000 MHz

PACKAGE DATA

Item \ Package	21SMX
Lid	Metal
Base	Ceramic
Sealing	Seam
Terminal	Tungsten (metalized)
Terminal plating	Gold / Nickel (surface) / (under)
RoHS	Compliant (Pb-free)

21SMX STANDARD FREQUENCIES

Frequency MHz	Frequency Designator	Max. Equivalent Series Resistance Ohms (Ω) ESR
20.000000	200	100
24.000000	240	80
25.000000	250	80
26.000000	260	60
27.000000	270	60
27.120000	271	60
28.636300	286	60
30.000000	300	60
32.000000	320	60
36.000000	360	60
38.400000	384	60
40.000000	400	50
42.000000	420	50
44.545000	44545	50
48.000000	480	50