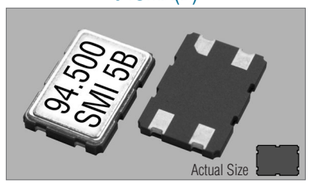
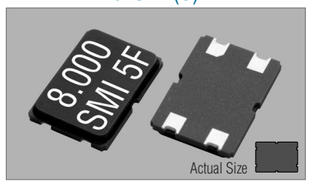
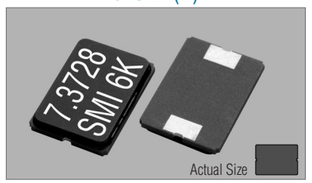
94SMX(B)



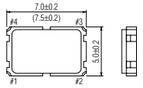
94SMX(C)

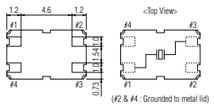


94SMX(D)

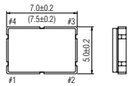


94SMX(B)

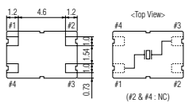




94SMX(C)



Package	Height(H)	Sealing	RoHS
94SMX(1.4C)	1.4±0.2mm	Glass	Compliant
94SMX(1.1C)	1.1±0.2mm	Epoxy	Compliant (Pb-free)



STANDARD SPECIFICATIONS

1. Package type ..... 94SMX(B), 94SMX(C) & 94SMX(D)
2. Frequency range ..... 94SMX(B) : 8.000 MHz to 150.000 MHz
   94SMX(C) : 6.000 MHz to 160.000 MHz
   94SMX(D) : 6.000 MHz to 160.000 MHz
3. Frequency tolerance ..... ±50 ppm at +25°C ±3°C
4. Temperature stability (referred to +25°C) ..... ±50 ppm over −20°C to +70°C
5. Load capacitance (CL) ..... 16 pF, Typical
6. Shunt capacitance (Co) ..... 5 pF max.
7. Drive level (P) ..... 100 μW max. (10 μW for testing)
8. Aging ..... ± 5 ppm max. at +25°C ±3°C per year
9. Cut/Oscillation mode ..... AT−Cut/Fundamental (6.000 MHz to 80.000 MHz)
   AT−Cut/3rd overtone (40.000 MHz to 160.000 MHz)
10. Reflow condition ..... 10 seconds max. at +250°C±10°C

PART NUMBERING GUIDE

94 M 800 — 16 (D) 3OT

- 94 — Package type
- M — Circuit calibration condition
- 800 — Frequency designator
- 16 — Load capacitance (CL)
- (D) — Package type
- 3OT — Oscillation mode

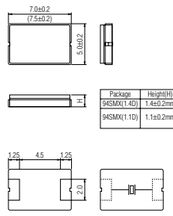
EXAMPLE

SMI PART NO.	Package	Circuit Calibration Condition	Frequency	Oscillation mode
94M800-16(D)3OT	94(D) = 94SMX(D)	M = Parallel resonance CL = 16pF	800 = 80.000 MHz	30T = 3rd overtone
94M073−18(C)	94(C) = 94SMX(C)	M = Parallel resonance CL = 18pF	073 = 7.37280 MHz	Fundamental (No indication with P/N)
94S945(B)30T	94(B) = 94SMX(B)	S = Series resonance	945 = 94.500 MHz	30T = 3rd overtone

PACKAGE DATA

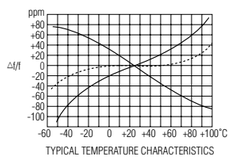
Item \ Package	94SMX(B)	94SMX(C)	94SMX(D)
Lid	Metal	Ceramic	Ceramic
Base	Ceramic	Ceramic	Ceramic
Sealing	Seam	See drawing	See drawing
Terminal	Tungsten (metalized)	Tungsten (metalized)	Tungsten (metalized)
Terminal plating	Gold / Nickel (surface) / (under)	Gold / Nickel (surface) / (under)	Gold / Nickel (surface) / (under)
RoHS	Compliant(Pb-free)	See drawing	See drawing

94SMX(D)



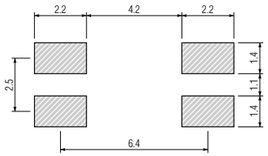
Package	Height(H)	Sealing	RoHS
94SMX(1.4D)	1.4±0.2mm	Glass	Compliant
94SMX(1.1D)	1.1±0.2mm	Epoxy	Compliant (Pb-free)

AT-CUT

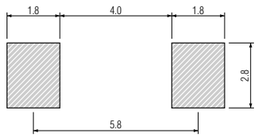


TYPICAL TEMPERATURE CHARACTERISTICS

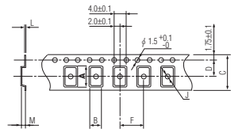
SOLDERING PATTERN
for 94SMX(B) & 94SMX(C)



SOLDERING PATTERN
for 94SMX(D)

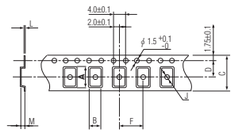


TAPE SPECIFICATIONS
for 94SMX(B)



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
7.3	5.3	16.0	7.5	8.0	1.5	0.3	1.9	330 300	1000pcs

TAPE SPECIFICATIONS
for 94SMX(C) & 94SMX(D)



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
7.4	5.4	16.0	7.5	8.0	1.5	0.3	1.8	178	1000pcs

94SMX STANDARD FREQUENCIES

FREQUENCY MHz	FREQUENCY DESIGNATOR	MAX EQUIVALENT SERIES RESISTANCE OHMS(Ω) ESR
6.000000	060	80
6.144000	061	80
7.372800	073	80
7.600000	076	80
8.000000	080	60
9.216000	092	60
9.830400	098	60
9.843750	0984	60
10.000000	100	50
10.245000	1024	50
10.368000	103	50
11.059200	1105	50
12.000000	120	50
12.288000	122	50
12.800000	128	50
13.000000	130	50
13.500000	135	50
13.560000	1356	50
13.567200	135672	50
13.824000	138	50
14.318180	143	50
14.725000	1472	50
14.745600	147	50
15.360000	153	50
16.000000	160	50
16.368000	1636	50
16.384000	163	50
16.670000	1667	50
18.000000	180	50
18.432000	184	50
19.660800	196	50
20.000000	200	40
20.480000	204	40
20.945000	209	40
21.245000	2124	40
23.421000	234	40
23.670833	236	40
24.576000	245	40
25.000000	250	40

FREQUENCY MHz	FREQUENCY DESIGNATOR	MAX EQUIVALENT SERIES RESISTANCE OHMS(Ω) ESR
27.000000	270	40
28.224000	282	40
28.600000	286	40
28.636363	2863	40
29.498928	29498	40
30.000000	300	40
31.914800	319	40
33.333000	333	40
33.553000	335	40
35.328000	353	40
35.468950	354	40
36.000000	360	40
36.864000	368	40
39.600000	396	40
40.000000	400	40
45.555000	455	80 (3rd OT)
49.152000	491	80 (3rd OT)
56.448000	564	80 (3rd OT)
56.500000	565	80 (3rd OT)
57.645000	576	80 (3rd OT)
61.440000	614	40
64.000000	640	80 (3rd OT)
70.537600	705	80 (3rd OT)
72.303330	723	40
72.837500	728	80 (3rd OT)
76.210000	762	80 (3rd OT)
77.500000	775	80 (3rd OT)
78.555000	7855	80 (3rd OT)
78.587500	7858	80 (3rd OT)
80.000000	800	80 (3rd OT)
80.910000	809	80 (3rd OT)
81.840000	818	80 (3rd OT)
85.250000	852	80 (3rd OT)
86.784000	867	80 (3rd OT)
94.500000	945	80 (3rd OT)
100.000000	100	80 (3rd OT)