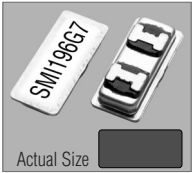


92SMX(D)



92SMX(E)



92SMX(F)



SPECIFICATIONS

- Package type 92SMX(D)*, 92SMX(E) & 92SMX(F)
- Frequency range 92SMX(D) : 3.579545 MHz to 36.000 MHz
92SMX(E) : 3.579545 MHz to 30.000 MHz
92SMX(F) : 3.579545 MHz to 30.000 MHz
- Frequency tolerance O : ± 10 ppm at $+25^{\circ}\text{C} \pm 3^{\circ}\text{C}$
Q : ± 15 ppm at $+25^{\circ}\text{C} \pm 3^{\circ}\text{C}$
R : ± 20 ppm at $+25^{\circ}\text{C} \pm 3^{\circ}\text{C}$
- Temperature stability (referred to $+25^{\circ}\text{C}$) See table below

Ope. Temp. Range	Temperature Stability	PPM									
		± 3.0 (FF)	± 5.0 (JJ)	± 7.5 (LL)	± 10 (OO)	± 15 (QQ)	± 20 (RR)	± 30 (TT)	± 50 (XX)	± 100 (CC)	± 150 (GG)
0 ~ +45°C (edd)		○	○	○	○	○	○	○	○	○	○
0 ~ +50°C (eee)			○	○	○	○	○	○	○	○	○
0 ~ +60°C (egg)			○	○	○	○	○	○	○	○	○
0 ~ +70°C (eii)			○	○	○	○	○	○	○	○	○
-10 ~ +50°C (gee)			○	○	○	○	○	○	○	○	○
-10 ~ +60°C (ggg)			○	○	○	○	○	○	○	○	○
-10 ~ +70°C (gii)			○	○	○	○	○	○	○	○	○
-10 ~ +75°C (gij)				○	○	○	○	○	○	○	○
-20 ~ +70°C (iii)				○	○	○	○	○	○	○	○
-20 ~ +75°C (ijj)				○	○	○	○	○	○	○	○
-30 ~ +75°C (kii)					○	○	○	○	○	○	○
-30 ~ +80°C (kkk)					○	○	○	○	○	○	○
-30 ~ +85°C (kll)					○	○	○	○	○	○	○
-35 ~ +80°C (lkk)						○	○	○	○	○	○
-40 ~ +85°C (mll)						○	○	○	○	○	○
-40 ~ +90°C (mmm)							○	○	○	○	○
-40 ~ +105°C (mpp)								○	○	○	○
-40 ~ +125°C (mtt)									○	○	○

○: Available (The extremes depend on actual frequencies.)

(*) formerly 49SMX-CB(N)

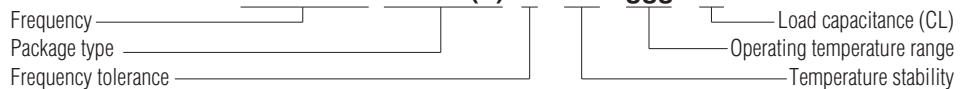
- Equivalent series resistance (ESR) See table below

Frequency	3.579545 MHz +	4.000 MHz +	6.000 MHz +	10.000 MHz +	14.000 MHz +	25.000 MHz +
ESR	200 Ω max.	150 Ω max.	100 Ω max.	80 Ω max.	50 Ω max.	40 Ω max.

- Shunt capacitance (Co) 5 pF max.
- Drive level (P) 100 μW max. (10 μW for testing)
- Aging ± 3 ppm max. at $+25^{\circ}\text{C} \pm 3^{\circ}\text{C}$ for first year
- Cut/Oscillation mode AT-Cut/Fundamental
- Reflow condition 10 seconds max. at $+250^{\circ}\text{C} \pm 10^{\circ}\text{C}$

PART NUMBERING GUIDE

4.000 MHz 92SMX(E) O / OO / ggg / 12



EXAMPLE

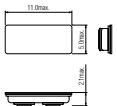
SMI PART NO.	Frequency	Package	Frequency tolerance
4.000 MHz 92SMX(E) O/OO/ggg/12	4.000 MHz	92SMX(E)	O = ± 10 ppm
16.000MHz 92SMX(D) O /QQ/iii/18	16.000 MHz	92SMX(D)	O = ± 10 ppm

Temperature stability	Operating temperature range	Load capacitance
OO = ± 10 ppm	ggg = -10°C to $+60^{\circ}\text{C}$	CL = 12 pF
QQ = ± 15 ppm	iii = -20°C to $+70^{\circ}\text{C}$	CL = 18 pF

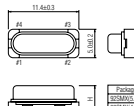
PACKAGE DATA

Item	Package	92SMX(D)	92SMX(E)	92SMX(F)
Lid/Cover		Metal	Metal	Metal
Base		Glass on metal	Metal	Metal
Insulator		n. a.	46nylon	46nylon
Sealing		Resistance	Resistance	Resistance
Terminal		Alloy (FeNiCo)	42alloy	42alloy
Terminal plating		Gold / Nickel (surface) / (under)	Tin	Tin
RoHS		Compliant (Pb-free)	Compliant (Pb-free)	Compliant (Pb-free)

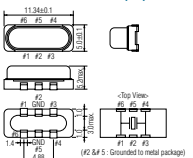
92SMX(D)



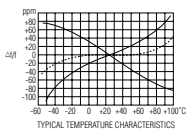
92SMX(E)



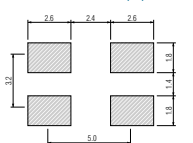
92SMX(F)



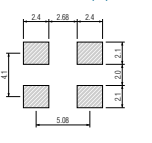
AT-CUT



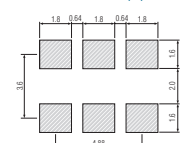
SOLDERING PATTERN for 92SMX(D)



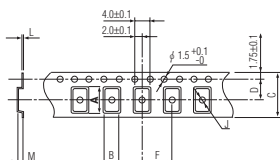
SOLDERING PATTERN for 92SMX(E)



SOLDERING PATTERN for 92SMX(F)



TAPE SPECIFICATIONS



for 92SMX(D)

A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
11.3	5.3	24.0	11.5	12.0	1.7	0.3	2.7	330	2000pcs

for 92SMX(E) & 92SMX(F)

A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
11.9	5.5	24.0	11.5	12.0	1.7	0.4	5.3	330	1000pcs