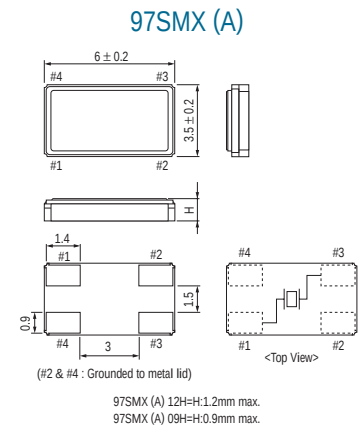
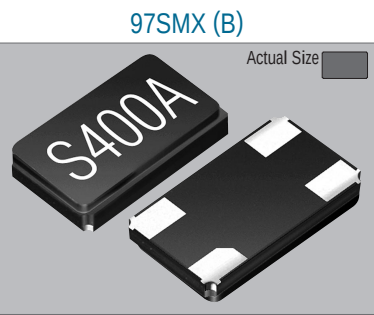
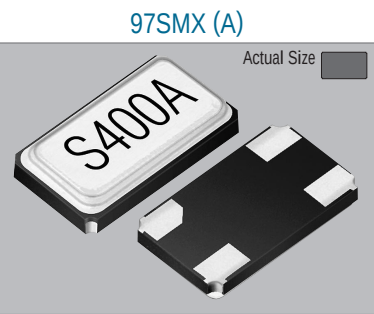


Quartz Crystal Units

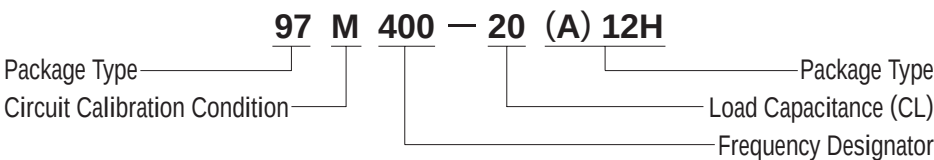
6 × 3.5mm FAMILY (97SMX)



STANDARD SPECIFICATIONS

1. Package type 97SMX(A), 97SMX(B) & 97SMX(C)
2. Frequency range 12.600 MHz to 100.000 MHz
3. Calibration tolerance ± 50 ppm at $+25^{\circ}\text{C} \pm 3^{\circ}\text{C}$
4. Temperature stability (referred to $+25^{\circ}\text{C}$) ± 50 ppm over -20°C to $+70^{\circ}\text{C}$
5. Load capacitance 16 pF
6. Shunt capacitance (C_0) 5 pF max.
7. Drive level (P) 100 μW max.
8. Aging ± 5 ppm max. at $+25^{\circ}\text{C} \pm 3^{\circ}\text{C}$ per year
9. Cut AT-Cut
10. Reflow soldering condition 10 seconds max. at $+235^{\circ}\text{C} \pm 5^{\circ}\text{C}$

PART NUMBERING GUIDE



EXAMPLE

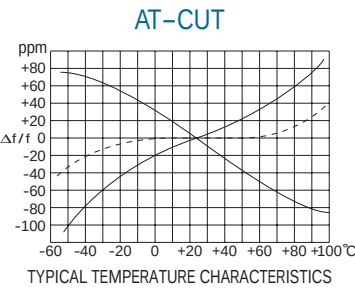
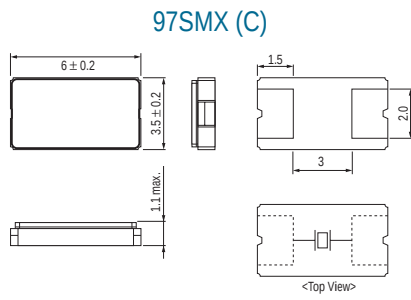
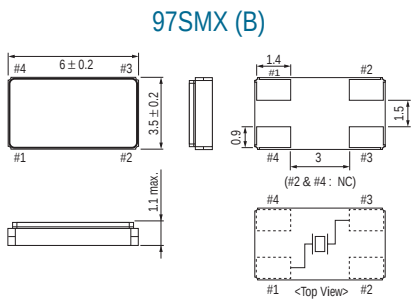
CIRCUIT CALIBRATION CONDITION	FREQUENCY	PACKAGE	SMI PART NO.
Parallel Resonance = M CL = 20 pF (Optional)	400 = 40.000 MHz	(A)12H=97SMX(A)12H	97M400-20(A)12H
Series Resonance = S (Optional)	400 = 40.000 MHz	(B)=97SMX(B)	97S400(B)

HOW TO ORDER STANDARD SMI CRYSTALS

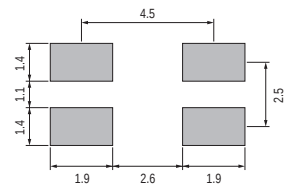
Order by SMI Part No.

PACKAGE DATA

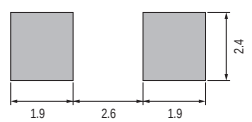
Item	Package	97SMX(A)	97SMX(B)	97SMX(C)
LID		Metal	Ceramic	Ceramic
BASE		Ceramic	Ceramic	Ceramic
SEALING		Seam-weld	Glass-frit / Resin	Glass-frit / Resin
TERMINAL PLATING		Gold	Gold	Gold



SOLDERING PATTERN for 97SMX (A) & 97SMX (B)



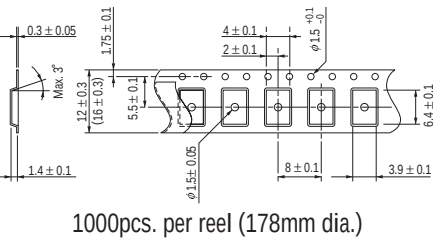
SOLDERING PATTERN for 97SMX (C)



97SMX STANDARD FREQUENCIES

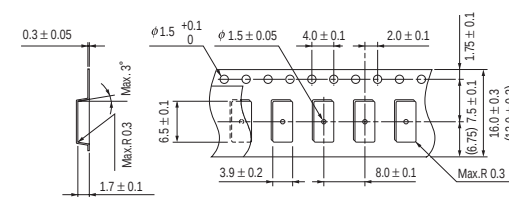
FREQUENCY MHz	FREQUENCY DESIGNATOR	MAXIMUM EQUIVALENT SERIES RESISTANCE OHMS	FREQUENCY MHz	FREQUENCY DESIGNATOR	MAXIMUM EQUIVALENT SERIES RESISTANCE OHMS
14.318180	143	80	24.000000	240	40
14.400000	144	80	24.000140	240001	40
14.484000	1448	80	24.576000	245	40
14.644000	146	80	25.000000	250	40
14.745600	147	80	25.175000	251	40
15.000000	150	80	25.312000	253	40
15.360000	153	80	27.000000	270	40
15.500000	155	80	28.000000	280	40
15.728640	157	80	28.224000	282	40
16.000000	160	60	28.636363	286	40
16.000312	160003	60	28.800000	288	40
16.044000	1604	60	29.491200	294	40
16.128000	1612	60	30.000000	300	40
16.147200	1614	60	32.000000	320	40
16.257000	162	60	32.215909	322	40
16.384000	163	60	33.333000	333	40
16.667000	166	60	33.868800	338	40
16.934400	169	60	35.251200	352	40
17.000000	170	60	35.468950	354	40
17.100000	171	60	36.000000	360	40
17.700000	177	60	40.000000	400	40
17.734475	1773	60	40.320000	403	40
18.000000	180	60	44.236800	442	40
18.432000	184	60	48.000000	480	40
18.867000	188	60	49.920000	499	40
18.869000	1886	60	50.000000	500	100 30T
18.870000	1887	60	50.680000	506	100 30T
19.200000	192	60	52.416000	524	100 30T
19.660800	196	60	56.448000	564	100 30T
20.000000	200	40	59.800000	598	100 30T
20.480000	204	40	64.000000	640	100 30T
20.736000	207	40	80.000000	800	100 30T
22.118400	221	40			

TAPE SPECIFICATIONS for 97SMX (A)



1000pcs. per reel (178mm dia.)

TAPE SPECIFICATIONS for 97SMX (B) & 97SMX (C)



1000pcs. per reel (178mm dia.)