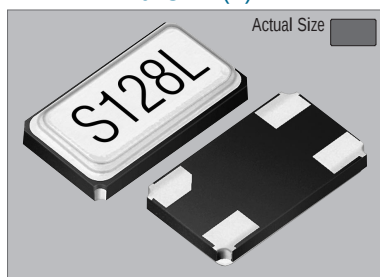
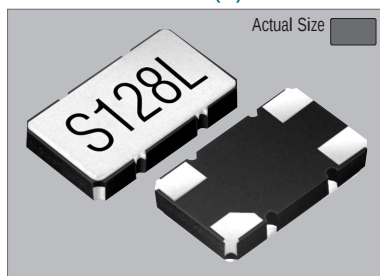


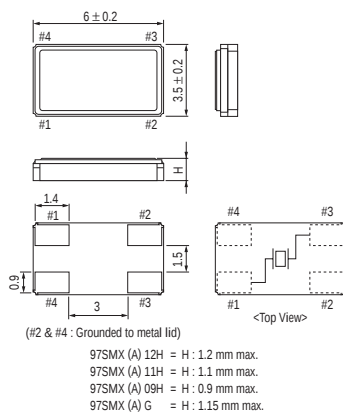
97SMX (A)



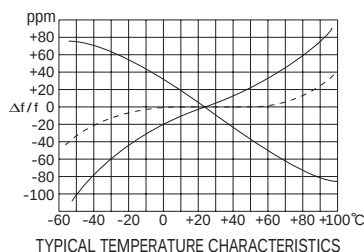
97SMX (A)G



97SMX (A) & 97SMX (A)G



AT-CUT



SPECIFICATIONS

- Package type 97SMX(A) & 97SMX(A)G
- Frequency range 12.600 MHz to 100.000 MHz
- Calibration 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 $+25^\circ\text{C} \pm 3^\circ\text{C}$
 T: ± 30 ppm at $+25^\circ\text{C} \pm 3^\circ\text{C}$
- Temperature stability (referred to $+25^\circ\text{C}$) See table below

Temp.	Stability	PPM							
Ope. Temp. Range.		± 3.0 (FF)	± 4.0 (HH)	± 5.0 (JJ)	± 7.5 (LL)	± 10 (OO)	± 15 (QQ)	± 20 (RR)	± 30 (TT)
0 ~ $+50^\circ\text{C}$ (eee)		O	O	O	O	O	O	O	O
-10 ~ $+50^\circ\text{C}$ (gee)			O	O	O	O	O	O	O
-10 ~ $+60^\circ\text{C}$ (ggg)				O	O	O	O	O	O
-10 ~ $+70^\circ\text{C}$ (gii)					O	O	O	O	O
-20 ~ $+70^\circ\text{C}$ (iii)						O	O	O	O
-30 ~ $+75^\circ\text{C}$ (kii)							O	O	O
-30 ~ $+80^\circ\text{C}$ (kkk)							O	O	O
-35 ~ $+80^\circ\text{C}$ (lkk)								O	O
-40 ~ $+85^\circ\text{C}$ (mll)								O	O

- Equivalent series resistance (ESR) 40 Ω max. (Fundamental)
 60 Ω max. (3rd overtone)
- Shunt capacitance (Co) 5 pF max.
- Drive level (P) 100 μW max. (10 μW for testing)
- Aging ± 2 ppm max. at $+25^\circ\text{C}$ per year
- Cut AT-Cut
- Reflow soldering condition 10 seconds max. at $+235^\circ\text{C} \pm 5^\circ\text{C}$

PART NUMBERING GUIDE

12.800 MHz 97SMX(A)12H O / QQ / kii / 10

Frequency Load Capacitance (CL)
 Package Type Operating Temperature Range
 Calibration Tolerance Temperature Stability

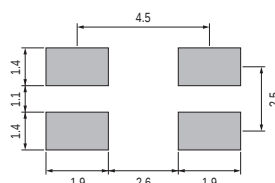
EXAMPLE

FREQUENCY	PACKAGE	CALIBRATION TOLERANCE	TEMPERATURE STABILITY
12.800 MHz	97SMX(A)12H	O = ± 10 ppm	QQ = ± 15 ppm
19.200 MHz	97SMX(A)G	Q = ± 15 ppm	RR = ± 20 ppm
OPERATING TEMPERATURE RANGE	LOAD CAPACITANCE	PART NUMBER	
kii = -30°C to $+75^\circ\text{C}$	10 pF	12.800 MHz 97SMX(A)12H	O/QQ/kii/10
lkk = -35°C to $+80^\circ\text{C}$	12 pF	19.200 MHz 97SMX(A)G	Q/RR/lkk/12

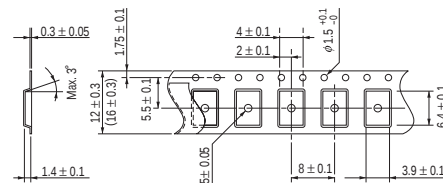
PACKAGE DATA

Item	Package	97SMX (A)	97SMX (A)G
LID		Metal	Metal
BASE		Ceramic	Ceramic
SEALING		Seam-weld	Au-Sn frit
TERMINAL PLATING		Gold	Gold

SOLDERING PATTERN



TAPE SPECIFICATIONS



	QTY/REEL	REEL DIA
97SMX(A)XXH :	1000 pcs	178 mm
97SMX(A)G :	2000 pcs	250 mm