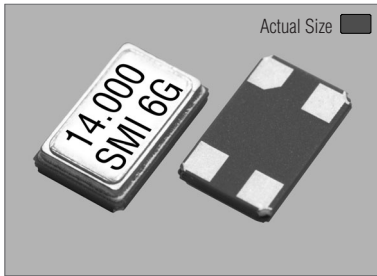


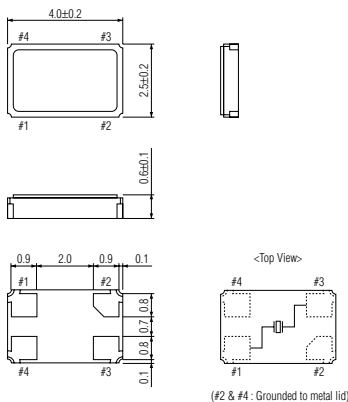
42SMX

CUSTOM-DESIGNED HIGH SPEC SMD CRYSTALS

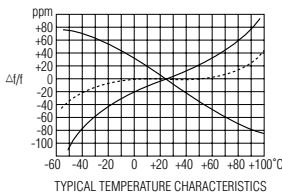
42SMX



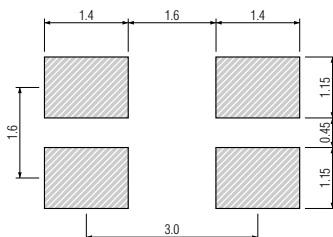
42SMX



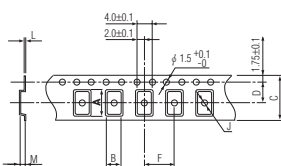
AT-CUT



SOLDERING PATTERN



TAPE SPECIFICATIONS



A	B	C	D	F	J	L	M	Reel Dia.	Qty/Reel
4.4	2.9	12.0	5.5	4.0	1.5	0.3	0.8	180	3000pcs (1000pcs)

SPECIFICATIONS

- Package type 42SMX
- Frequency range 12.000 MHz to 50.000 MHz
- Frequency tolerance O : ±10 ppm at +25°C ±3°C
Q : ±15 ppm at +25°C ±3°C
R : ±20 ppm at +25°C ±3°C
- Temperature stability (referred to +25°C) See table below

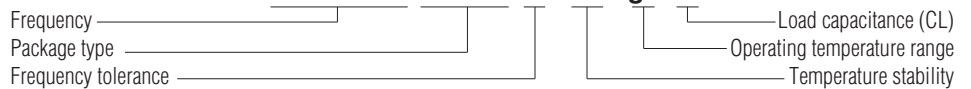
Ope. Temp. Range	Temperature Stability	PPM												
		±3.0 (FF)	±5.0 (JJ)	±7.5 (LL)	±10 (OO)	±15 (QQ)	±20 (RR)	±30 (TT)	±50 (XX)	±100 (CC)	±150 (GG)			
0~+45°C (edd)		○	○	○	○	○	○	○	○	○	○	○	○	○
0~+50°C (eee)		○	○	○	○	○	○	○	○	○	○	○	○	○
0~+60°C (egg)		○	○	○	○	○	○	○	○	○	○	○	○	○
0~+70°C (eii)		○	○	○	○	○	○	○	○	○	○	○	○	○
-10~+50°C (gee)			○	○	○	○	○	○	○	○	○	○	○	○
-10~+60°C (ggg)			○	○	○	○	○	○	○	○	○	○	○	○
-10~+70°C (gii)			○	○	○	○	○	○	○	○	○	○	○	○
-10~+75°C (gjj)				○	○	○	○	○	○	○	○	○	○	○
-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.)

- Equivalent series resistance (ESR) 80 Ω max. (12.000 MHz to 13.000 MHz)
60 Ω max. (13.000 MHz to 20.000 MHz)
50 Ω max. (20.000 MHz to 40.000 MHz)
40 Ω max. (40.000 MHz to 50.000 MHz)
- Shunt capacitance (Co) 5 pF max.
- Drive level (P) 100 μW max. (10 μW for testing)
- Aging ±2 ppm max. at +25°C ±3°C for first year
- Cut/Oscillation mode AT-Cut/Fundamental
- Reflow condition 10 seconds max. at +250°C ±10°C

PART NUMBERING GUIDE

39.000MHz 42SMX O / QQ / gii / 9



EXAMPLE

SMI PART NO.	Frequency	Package	Frequency tolerance
39.000 MHz 42SMX O/QQ /gii / 9	39.000 MHz	42SMX	O = ±10 ppm
14.000 MHz 42SMX Q/OO/ggg/8	14.000 MHz	42SMX	Q = ±15 ppm
Temperature stability	Operating temperature range	Load capacitance	
QQ = ±15 ppm	gii = -10°C to +70°C	CL = 9 pF	
OO = ±10 ppm	ggg = -10°C to +60°C	CL = 8 pF	

PACKAGE DATA

Item	Package	42SMX
Lid		Metal
Base		Ceramic
Sealing		Seam
Terminal		Tungsten (metalized)
Terminal plating		Gold / Nickel (surface) / (under)
RoHS		Compliant (Pb-free)