

**XC smd sub miniature crystal
(8 ~ 100)MHz**

- (7.0 x 5.0)mm, height 1.2mm
- ceramic metal package
- 16mm tape and reel
- 1000/ 2000/ 3000/ 5000 pieces per reel
- RoHS compliant

Electrical specification

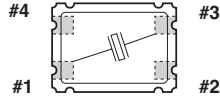
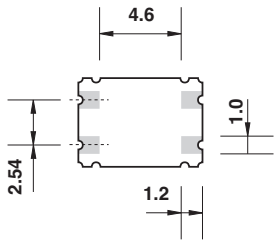
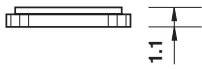
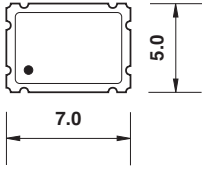
case style	XC: (7.0 x 5.0)mm, height 1.2mm
frequency range	(8.0 ~ 100)MHz
standard frequencies	10.0MHz, 11.0MHz, 12.00MHz, 13.00MHz, 16.0MHz, 14.4MHz, 15.36MHz, 16.00MHz, 16.367MHz, 16.934MHz, 19.2MHz, 19.44MHz, 19.68MHz, 20.0MHz, 24.00MHz, 26.0MHz, 40.0MHz, 40.32MHz
adjustment tolerance	from ± 10 ppm at +25°C, frequency dependent
temperature tolerance	from ± 5 ppm, frequency and temperature range dependent
operating temperature	(-10 +60)°C ~ (-40 +85)°C
storage temperature	(-55 +125)°C
load	customer specified
shunt capacitance C_0	(2.0 ~ 4.0)pF typical, 7.0pF max.
drive level	100 μ W
Q factor	80,000 typical
ageing	± 3 ppm first year max.
insulation resistance	500Meg. ohm min. at+100Vd.c.

Ordering information

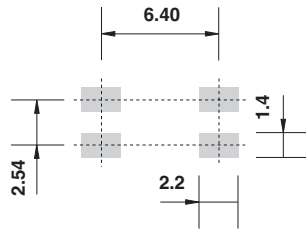
EXAMPLE	XC crystal, 16.00MHz, load 20pF, ± 10 ppm at +25°C, ± 10 ppm(-10 +60)°C
TFC PART NUMBER	XC 16.00M H B B I
XC	crystal series: XC
16.00M	frequency: 16.00M = 16.00MHz, frequency range from (8 ~ 100)MHz
H	load capacitance: H = 20pF
B	adjustment tolerance at +25°C: C = ± 10 ppm
B	temperature tolerance: B = ± 10 ppm
I	temperature range: I = (-10 +60)°C
OPTIONS	
load capacitance	A: 8pF, B: 9pF, C: 10pF, D: 12pF, E: 15pF, F: 16pF, G: 18pF, H: 20pF, J: 32pF, S: series
adjustment tolerance	A: ± 5 ppm, B: ± 10 ppm, P: ± 15 ppm, C: ± 20 ppm, E: ± 30 ppm, G: ± 50 ppm
temperature tolerance	A: ± 5 ppm, B: ± 10 ppm, P: ± 15 ppm, C: ± 20 ppm, E: ± 30 ppm, G: ± 50 ppm, H: ± 100 ppm
temperature range	I: (-10 +60)°C, C: (-20 +70)°C, L: (-40 +85)°C

XC sub miniature crystal

XC dimensions(mm)



Top view
pads #1 and #3 crystal
pads #2 and #4
connected to metal top



Suggested land pattern

Crystal pads are gold, 2.5 μ min., over nickel, suitable for vapour phase or reflow soldering

Pad size (2.2 x 1.4)mm

ESR - equivalent series resistance

frequency range(MHz)	cut/mode	esr(Ω)
8 ~ 11	AT1	<60
11 ~ 14	AT1	<50
14 ~ 40	AT1	<40
40 ~ 50	AT3	<80
50 ~ 100	AT3	<85