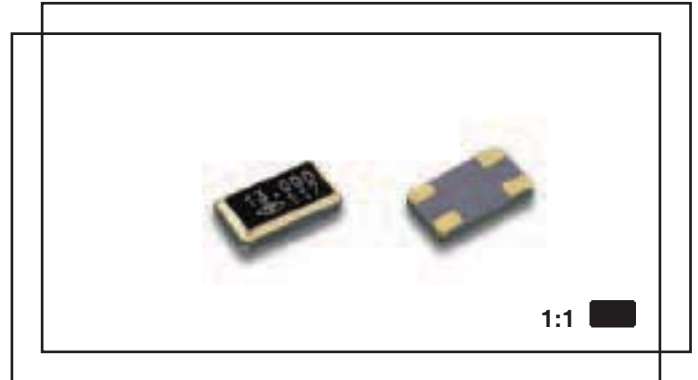


XR miniature smd crystal (9.60 ~ 125)MHz

- # (6.0 x 3.5)mm ceramic case
- # 16mm tape and reel
- # standard and custom frequencies
- # AT cut quartz
- # RoHS compliant



Electrical specification

Case style	XR: height 1.0mm
Frequency range	(9.60 ~ 49.0)MHz fundamental, (30.0 ~ 125)MHz 3rd OT
Adjustment tolerance	from ± 5 ppm at +25°C, frequency dependant
Temperature tolerance	from ± 5 ppm, frequency and temperature range dependant
Operating temperature	(-10 +60)°C ~ (-40 +85)°C
Storage temperature	(-40 +85)°C min. ~ (-55 +125)°C max.
Load	customer specified
Shunt capacitance	7.0pF max.
Drive level	10 μ W typical, 100 μ W max.
Ageing	± 1 ppm ~ ± 3 ppm max. per year
Insulation resistance	500M Ω min. at 100Vd.c.

Ordering information

The XR smd crystals may be specified within their available frequency range together with load capacitance, adjustment tolerance, temperature tolerance and temperature range with each parameter coded as follows

Example XR crystal, 13.00MHz, load 20pF, ± 10 ppm at +25°C, ± 10 ppm(-10 +60)°C

TFC PART NUMBER XR 13.00M H B B I

'XR' crystal series: XR

'13.00M' frequency: 13.00M = 13.00MHz, frequency range from (9.60 ~ 125)MHz

'H' load capacitance: H = 20pF

'B' adjustment tolerance at +25°C: B = ± 10 ppm

'B' temperature tolerance: B = ± 10 ppm

'I' temperature range: I = (-10 +60)°C

Load capacitance A: 8pF, B: 9pF, C: 10pF, D: 12pF, E: 15pF, F: 16pF,

G: 18pF, H: 20pF, I: 30pF, J: 32pF, S: series

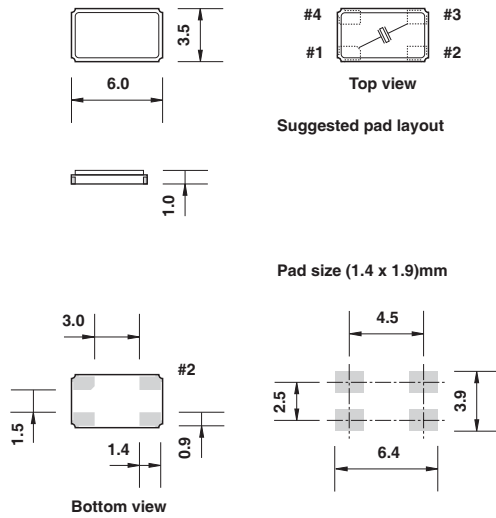
Adjustment tolerance A: ± 5 ppm, B: ± 10 ppm, P: ± 15 ppm, C: ± 20 ppm, E: ± 30 ppm, G: ± 50 ppm, H: ± 100 ppm

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

XR miniature smd crystal

XR dimensions(mm) shown twice full size



ESR - equivalent series resistance

frequency range(MHz)	cut/mode	esr(Ω)
9.60 ~ <12.0	AT1	<80
12.0 ~ <13.0	AT1	<60
13.0 ~ <19.0	AT1	<60
19.0 ~ <20.0	AT1	<40
20.0 ~ <30.0	AT1	<40
30.0 ~ 49.0	AT1	<40
30.0 ~ <40.0	AT3	<100
40.0 ~ <50.0	AT3	<80
50.0 ~ 125.0	AT3	<40