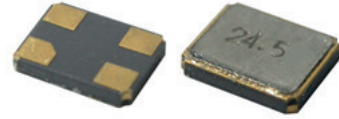


X20 CERAMIC SURFACE-MOUNT CRYSTAL

FEATURES

- Ultra small SMD package
- Very Low Ageing
- Applications : Bluetooth, Wireless applications, Mobile Phones, IoT, ...

2.0 X 1.6 X 0.50 MM



Item	Symbol	Specification
Freq. Range	Fo	16 MHz ~ 80 MHz
Operation mode		Fundamental
Operating temperature Range	To	-20° to +70°C (see options)
Frequency Tolerance at 25°C	Δf/F	± 50ppm max. (see options)
Temperature Stability	Δf/F	± 50ppm max. (see options)
Load Capacitance (CL)	CL	series or 6 pF to 50 pF (see options)
Equivalent Series Resistance	ESR	See Table 1
Shunt Capacitance (Co)	Co	3pF Max
Insulation Resistance	Ri	500 MΩ min. (at 100Vdc)
Drive Level	DL	10μW typical, 100μW max.
Aging	Δf/F	±1ppm max (at 25°C, first year)
Packaging Unit		3000pcs / reel
Soldering Condition		260°C, 10 sec x2 max
		Customer specifications on request

TABLE 1: Standard ESR

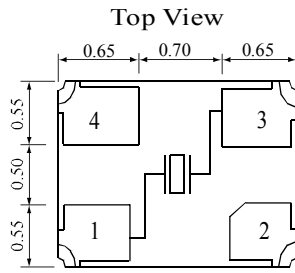
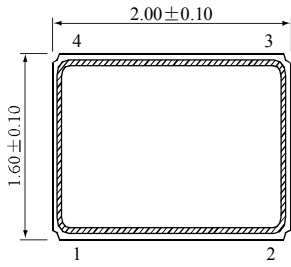
Frequency (MHz)	ESR (Ω) max.
16.0 - 19.9	120
20.0 - 23.9	80
24.0 - 29.9	60
30.0 - 39.9	50
40.0 - 80.0	40

ORDERING INFORMATION

X20 - MHz	
	Freq. Tolerance	Freq. Stability	Operating Temp.	Load Capacitance	Mode	ESR if other than STD	Frequency in MHz
	10 = ± 10ppm	05 = ± 5ppm	D = -10° / +60°C	Please specify CL in	F: Fundamental	Specify a value in Ω	Please specify the
	15 = ± 15ppm	10 = ± 10ppm	E = 0° / +70°C	pF or S for Series			frequency in MHz
	20 = ± 20ppm	15 = ± 15ppm	F = -20° / +70°C				
	25 = ± 25ppm	20 = ± 20ppm	G = -30° / +75°C				
	30 = ± 30ppm	25 = ± 25ppm	H = -30° / +85°C				
	50 = ± 50ppm	30 = ± 30ppm	K = -40° / +85°C				
		50 = ± 50ppm	L = -40° / +105°C				
			M = -40° / +125°C				

* Note : Not all combinations are possible, please consult us.

OUTLINE DIMENSIONS



Recommended Solder Pattern

