

X31 32.768 kHz SURFACE-MOUNT CRYSTAL

FEATURES

- Miniature SMD package
- Extended temperature -40°C to +85°C for industrial applications
- Applications: Wireless applications, Commercial and Industrial applications

3.2 x 1.5 x 0.7 mm



Item	Symbol	Specification
Nominal Frequency	Fo	32.768 kHz
Cut		XY-cut
Operating temperature Range	To	-40° to +85°C
Frequency Tolerance at 25°C	Δf/F	± 20ppm standard (see options)
Temperature coefficient	β	-0.040 ppm/°C ² max
Load Capacitance (CL)	CL	12.5 pF standard (see options)
Equivalent Series Resistance	ESR	45 kΩ typ. , 60 kΩ max.
Quality Factor	Q	30000 typ.
Shunt Capacitance (Co)	Co	0.95 pF typ.
Insulation Resistance	Ri	500 MΩ min. (at 100Vdc)
Drive Level	DL	1.0 μW max.
Aging	Δf/F	±3ppm max (at 25°C, first year)
Packing Unit		3000pcs / reel
Soldering Condition		260°C, 10 sec x2 max
		Customer specifications on request

OPTIONS & ORDERING INFORMATION

X31- — —	32.768 kHz
	Freq. Tolerance	Load Capacitance	
	10 = ±10 ppm	12.5 = 12.5 pF	
	20 = ±20 ppm	9 = 9.0 pF	
	30 = ±30 ppm	7 = 7.0 pF	
		6 = 6.0 pF	

OUTLINE DIMENSIONS

