

# X15 32.768 kHz SURFACE-MOUNT CRYSTAL

## FEATURES

- Smallest industry package size for 32.768 kHz
- Extended temperature -40/+85°C for industrial applications
- Applications : Wireless applications , Commercial and Industrial applications

1.6 x 1.0 x 0.5 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	$\Delta f/F$	$\pm 20$ ppm standard (see options)
Temperature coefficient	$\beta$	-0.040 ppm/°C <sup>2</sup> max
Load Capacitance (CL)	CL	12.5 pF standard (see options)
Equivalent Series Resistance	ESR	90 k $\Omega$ max.
Insulation Resistance	Ri	500 M $\Omega$ min. (at 100Vdc)
Drive Level	DL	0.5 $\mu$ W max.
Aging	$\Delta f/F$	$\pm 3$ ppm max (at 25°C, first year)
Packing Unit		3000pcs / reel
Soldering Condition		260°C, 10 sec x2 max

## OPTIONS & ORDERING INFORMATION

X15-	..... —	..... —	32.768 kHz
	<b>Freq. Tolerance</b>	<b>Load Capacitance</b>	
	10 = $\pm 10$ ppm	12.5 = 12.5 pF	
	20 = $\pm 20$ ppm	9 = 9.0 pF	
	30 = $\pm 30$ ppm		
	50 = $\pm 50$ ppm		

## OUTLINE DIMENSIONS

