

TB15SMX

32.768 kHz SURFACE MOUNT CRYSTAL

FEATURES

- ▶ Miniature SMD package
- ▶ Formed leads for low cost SMD type
- ▶ Applications : RealTime Clock , Wireless applications ,

5.0 x 1.5 mm cylindrical



Item	Symbol	Specification
Nominal Frequency	Fo	32.768 kHz / 30.0 - 100.0 kHz*
Cut		XY-cut
Operating temperature Range	To	-40° to +85°C
Frequency Tolerance at 25°C	$\Delta f/F$	± 20 ppm standard (see options)
Temperature coefficient	β	-0.040 ppm/°C ² max
Load Capacitance	CL	12.5 pF standard (see options)
Equivalent Series Resistance	ESR	60 k Ω max.
Quality Factor	Q	60000 typ.
Shunt Capacitance	Co	1.00 pF typ.
Insulation Resistance	Ri	500 M Ω min. (at 100Vdc)
Drive Level	DL	1.0 μ W typ.
Aging	$\Delta f/F$	± 3 ppm max (at 25°C, first year)
Packing Unit		3000pcs / reel
Soldering Condition		260°C , 10 sec x2 max

*Need to contact us for the available frequency.

OPTIONS & ORDERING INFORMATION

TB15SMX			32.768 kHz
	Freq. Tolerance	Load Capacitance	
	10 = ± 10 ppm	12.5 = 12.5 pF	
	20 = ± 20 ppm	10 = 10.0 pF	
	30 = ± 30 ppm	9 = 9.0 pF	
		7 = 7.0 pF	
		6 = 6.0 pF	

OUTLINE DIMENSIONS (MM)

