

# TB38 kHz THRU-HOLE CRYSTAL

## FEATURES

- Low cost for consumer applications
- Watch frequency
- Applications: Real time clock,...

8.0 x 3.0 mm cylindrical



Item	Symbol	Specification
Nominal Frequency	Fo	32.768 kHz / 30.0 kHz ~ 100 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/°C² max
Load Capacitance (CL)	CL	12.5 pF standard (see options)
Equivalent Series Resistance	ESR	35 kΩ max.
Quality Factor	Q	85000 typ.
Shunt Capacitance (Co)	Co	1.80 pF typ.
Insulation Resistance	Ri	500 MΩ min. (at 100Vdc)
Drive Level	DL	1.0 μW max.
Aging	Δf/F	±5ppm max (at 25°C, first year)
Packing Unit		Bulk in bag
		<b>Customer specifications on request</b>

\* Need to contact us for the available frequency

## OPTIONS & ORDERING INFORMATION

TB38-	..... —	..... —	..... kHz
	<b>Freq. Tolerance</b>	<b>Load Capacitance</b>	<b>Frequency in kHz</b>
	10 = ±10 ppm	12.5 = 12.5 pF	Please specify the frequency in kHz
	20 = ±20 ppm	10 = 10.0 pF	
	30 = ±30 ppm	9 = 9.0 pF	
		7 = 7.0 pF	
		6 = 6.0 pF	

## OUTLINE DIMENSIONS

