

QUARTZ CRYSTAL RESONATOR

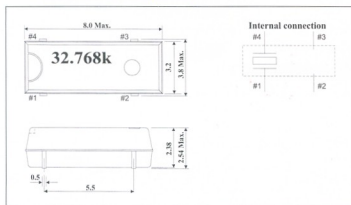
SERIES CS8B SMD TYPES



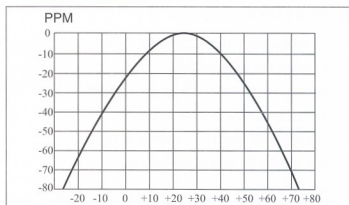
FEATURES

Frequency: 30.000KHz~165.000KHz
Industry-standard package
Compact and low-profile: 8x3.8x2.5mm
Tape & Reel Package

OUTLINES & MECHANICAL DIMENSIONS (mm):



STABILITY/TEMPERATURE PERFORMANCE:



ELECTRICAL SPECIFICATIONS:

Item	Specification	Conditions
Nominal Frequency	32.768KHz	30.000KHz~165.000KHz
Frequency Tolerance	$\pm 10\text{ppm}$, $\pm 20\text{ppm}$, $\pm 30\text{ppm}$, $\pm 50\text{ppm}$, $\pm 100\text{ppm}$	$T_a=25^\circ\text{C}$ $\pm 3^\circ\text{C}$, $DL \leq 1.0\text{uW}$
Load Capacitance	6.0pF, 12.5pF(Typical)	
Operating Temperature Range	$-40^\circ\text{C} \sim +85^\circ\text{C}$	
Storage Temperature Range	$-55^\circ\text{C} \sim +125^\circ\text{C}$	
Drive Level	1.0uW Max	
Soldering Conditions	Refer to Chart 2.2	
Turnover Temperature	$25^\circ\text{C} \pm 3^\circ\text{C}$	
Equivalent Series Resistance	32.0~40.0KHz: 50K Ω .max 40.0~60.0KHz: 40K Ω .max 60.0~70.0KHz: 35K Ω .max 70.0~100.0KHz: 35K Ω .max 100.0~165KHz: 30K Ω .max	$T_a=25^\circ\text{C} \pm 3^\circ\text{C}$, $DL \leq 1.0\text{uW}$
Shunt Capacitance	2.0pF;(32.768KHz)1.5 ± 0.2 pF	
Insulation Resistance	500M Ω min	DC=100W
Aging	$\pm 3\text{ppm}$, $\pm 5\text{ppm}/\text{year}$	$T_a=25^\circ\text{C} \pm 3^\circ\text{C}$