

**SURFACE MOUNT TYPE LOW FREQUENCY (PLASTIC MOLDED PACKAGE)**

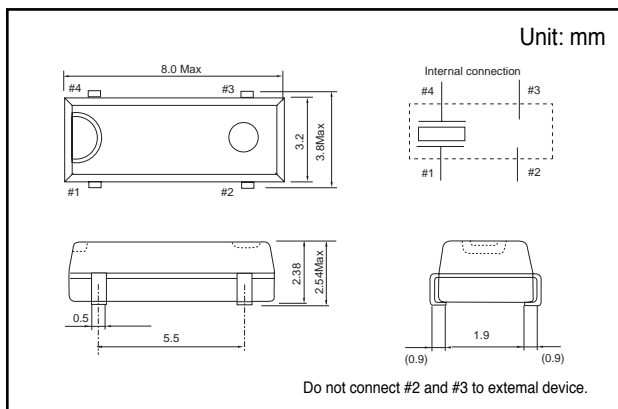
- High density mounting type SMD
- Photolithography finish allows uniform and stable performance
- Excellent reliability and environmental capability
- 2.54mm thickness which is equal to SMD type IC



**ELECTRICAL SPECIFICATIONS**

Item	Symbol	Specifications		Remarks
Nominal Frequency	f	32.768KHz	20.000 ~ 165.000KHz	Please consult us except for 32.768KHz
Storage Temperature	TSTG	-55°C ~ + 125°C		Stored as bare product after unpacking
Operating Temperature	TOPR	-40°C ~ + 85°C		
Maximum Drive Level	GL	1.0 uWatts Max		
Soldering Condition	TSOL	Twice at under 260°C within 10 sec. or under 230°C within 3min.		
Frequency Tolerance (Standard)	$\Delta f/f$	$\pm 20\text{ppm}$ $\pm 50\text{ppm}$	$\pm 20\text{ppm}$ $\pm 50\text{ppm}$	TA=25°C, DL=0.1 uWatts
Peak Temperature (Frequency)	OT	25°C $\pm$ 5°C		
Temperature Coefficient (Frequency)	a	-0.04ppm /°C <sup>2</sup> Max		
Load Capacitance	CL	6pf ~ $\infty$		Please specify
Series Resistance	R1	55K $\Omega$ Max	55K $\Omega$ ~ 10K $\Omega$	
Motional Capacitance	C1	1.8fF tpf	4.0fF ~ 0.6fF	
Shunt Resistance	C0	0.9pF tpf	2.0pF ~ 0.6pF	
Insulation Resistance	IR	500M $\Omega$ Min		
Aging	fa	$\pm 3\text{ppm/year}$ Max	$\pm 5\text{ppm/year}$ Max	Ta=25°C $\pm$ 3°C, first year
Shock Resistance	S.R.	$\pm 5\text{ppm}$ Max		Drop test of 3 times on a hard board from 75cm height or excitation test with 3000G x 0.3ms x 1/2 Sine Wave x 3 direction.

**EXTERNAL DIMENSIONS**



**RECOMMENDED SOLDERING PATTERN**

