

Features

- Frequency range : 32.768 kHz
- SMD : Plastic package
- External dimensions (mm)
L : 6.9 x W : 1.4 x H : 1.4
- RoHS compliant
Contains Pb, exempted by RoHS directive

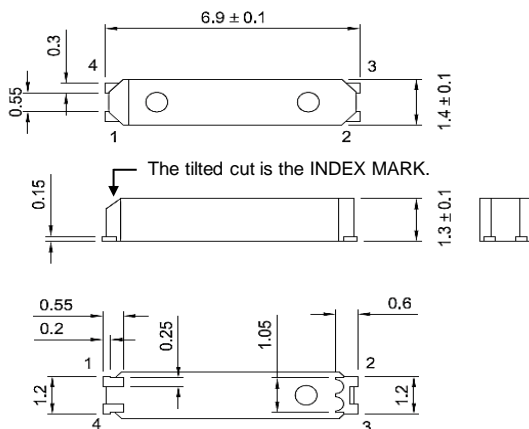
Applications

- Small mobile devices
Consumer products

Electrical Characteristics

Item	Symbol	QT1M	Conditions
Nominal Frequency	f_0	32.768 kHz	
Frequency Tolerance	$\Delta f/f_0$	$\pm 20\text{ppm}$, $\pm 30\text{ppm}$, $\pm 50\text{ppm}$	at 25°C
Load Capacitance	C_L	7pF, 9pF, 12.5pF	
Operating Temperature Range	T_{OTR}	-40°C ~ +85°C	
Storage Temperature Range	T_{STR}	-55°C ~ +125°C	
Turnover Temperature	T_M	25°C \pm 5°C	
Temperature Coefficient	β	-0.04ppm/°C ² Max.	
Motional Capacitance	C_1	1.9 fF Typ.	
Motional Resistance (ESR)	R_1	65 kΩ Max.	at 25°C
Drive Level	D_L	1 μ W Max.	
Aging	$\Delta f/f_0$	± 3 ppm Max.	at 25°C \pm 3°C, first year
Shunt Capacitance	C_0	0.8 pF Typ.	

Dimensions



Internal Connection



Do not connect pin2 & pin3 to external device.

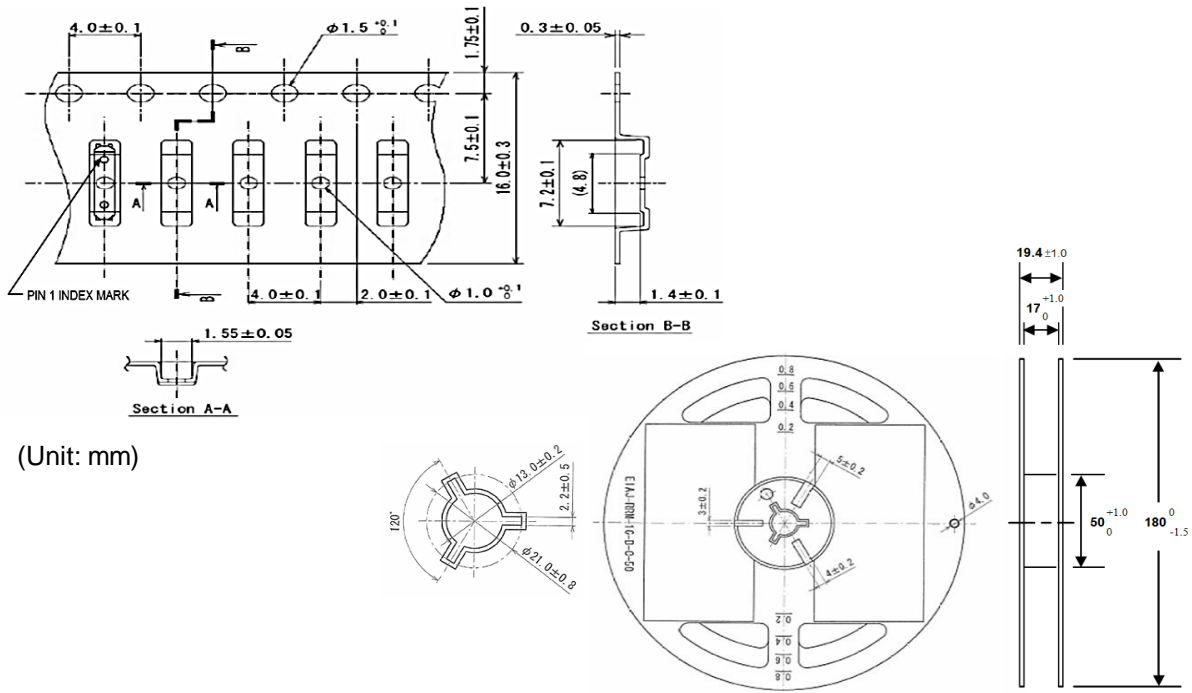
(Unit: mm)

Ordering Information

QT1M - 32.768K - D Z F - T

Frequency Tolerance (at 25°C)		Packaging Method	
B	± 50 ppm	T	Tape & Reel
A	± 30 ppm		
D	± 20 ppm		
Frequency Stability (over Temp.)		Load Capacitance	
Z	Standard for kHz	Y	7 pF
		C	9 pF
		F	12.5 pF

Packing



(Unit: mm)

Reflow Profile

Total time : Max. 200 sec.
Solder melting point : 220°C

