

## Crystals in QRT-38 cases

### General application

Computer clocks, Video and Audio equipments

### Features

The 38C is a cylinder-shaped compact most suitable for high-density mounting.

\*The 38CHT is a heat-resistant crystal unit.

Most suitable for pagers and card products like PCMCIA application



### Typical specifications

Type	QRT-38
Nominal frequency	32.000 - 100.000 kHz
Frequency tolerance	± 50 ppm, ± 100 ppm
Temperature coefficient	-0.04 ppm/°C max <sup>2</sup>
Series resistance	see table 2
Motional capacitance	3.0 fF max.
Shunt capacitance	1.5 pF max.
Insulation resistance	500 MΩ min.
Aging	± 5 ppm/year max.
Load capacitance	> 6 pF
Operating temperature range	-10 ... +60 °C
Storage temperature range	-20 ... +70 °C
Recommended drive level	0.1 μW
Maximum drive level	1.0 μW max.

Differences from standard values and other parameters can be consulted.

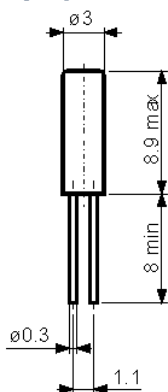
### Examples of standard frequencies and load capacity (table 1)

Type	Frequency	C <sub>L</sub>
QRT-38	26.6667 kHz	10.0 pF, 11.0 pF
	32.5600 kHz	7.0 pF
	36.8640 kHz	13.5 pF
	38.4000 kHz	10.0 pF
	44.7340 kHz	10.0 pF
	49.0000 kHz	15.0 pF
	75.0000 kHz	6.5 pF, 9.0 pF, 20.0 pF
	77.5030 kHz	10.0 pF, 20.0 pF
	76.8000 kHz	6.0 pF, 10.0 pF, 11.0 pF
	96.0000 kHz	6.0 pF, 8.4 pF, 11.0 pF

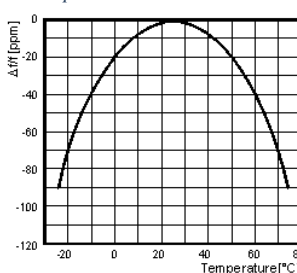
### Equivalent series resistance (ESR<sub>max</sub>) (table 2)

ESR <sub>max</sub>	Frequency [kHz]				
	33	40	60	70	100
	55 kΩ	30 kΩ	25 kΩ	22 kΩ	

### Outline dimensions [mm]



### The courses of frequency changes depending on temperature



### load capacitance

