

## CRYSTAL UNITS FOR CAR ELECTRONICS (AT-51 SERIES)

These crystal units are ideally suited for clock signal generating sources for CPUs for power trains and safety control devices requiring extremely high reliability as an electronic part used in a car.

### ■ Features

- High stability under strict conditions in terms of stable start-up characteristics, heat resistance, thermo-cycle resistance and vibration resistance.  
For further details, please contact us.
- Surface mount crystal unit that retains high-level electrical characteristics and reliability due to the resin seating attached to the AT-51 type crystal unit.



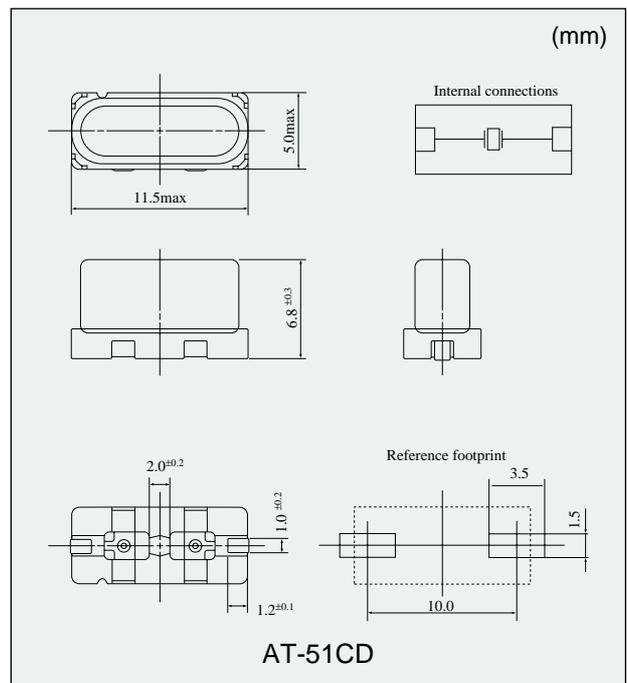
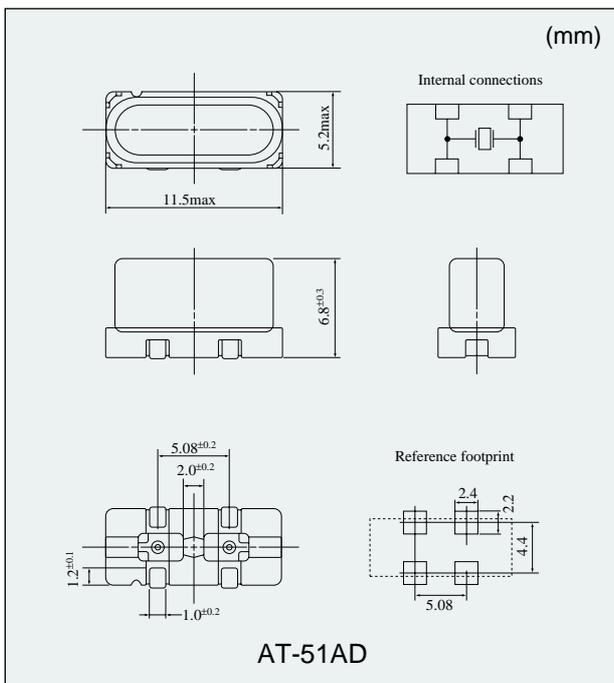
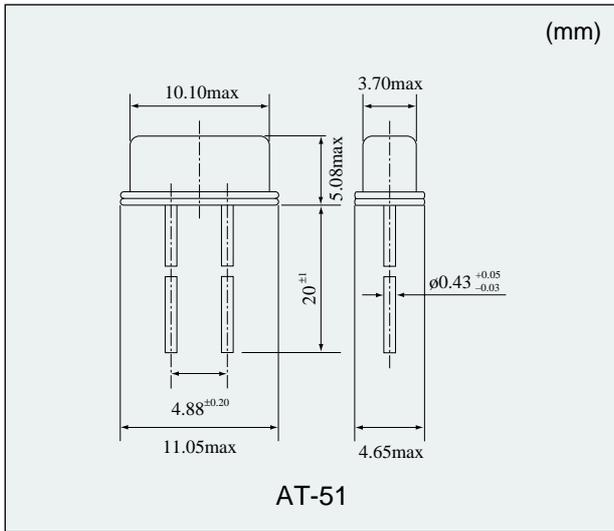
### ■ Specification

| Type   | AT-51 SERIES   |                                  |
|--|--|----------------------------------|
|  | Nominal Frequency (MHz)                              | Equivalent Series Resistance (Ω) |
| Nominal Frequency<br>&<br>Equivalent Series Resistance | 4  | 180                              |
|  | 6  | 120                              |
|  | 8  | 80                               |
|  | 10   | 70                               |
|  | 12   | 60                               |
|  | 16   | 50                               |
|  | 20   | 50                               |
| Overtone   | Fundamental  |                                  |
| Frequency Tolerance (overall)                          | $\pm 1000 \times 10^{-6}$ , $\pm 250 \times 10^{-6}$ |                                  |
| Operating Temperature Range                            | -40 ~ +125°C   |                                  |
| Drive Level  | 50μW (1000μW max)                                    |                                  |
| Standard Load Capacitance                              | 16pF   |                                  |

Measuring Circuit: CI Meter

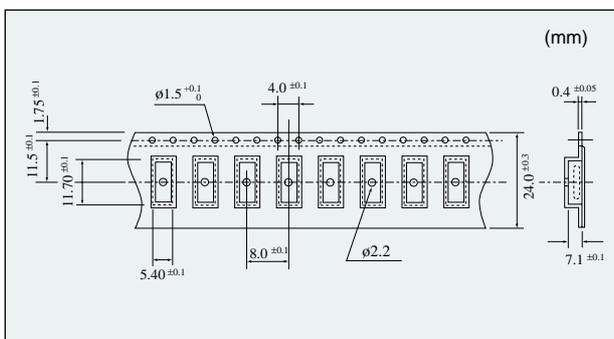
# CRYSTAL UNITS

## ■ Dimensions



## Taping Dimensions

### ■ Tape



### ■ Reel

