

## Features

- Frequency range : 20MHz to 66MHz
- Ultra compact and thin
- AuSn sealing, ceramic SMD package
- External dimensions (mm)  
L : 1.6 x W : 1.2 x H : 0.35
- RoHS compliant & Pb free

## Applications

- BT, BLE, W-LAN, NFC
- SiP modules
- Mobile phone, Wearables
- Internet of Things (IoT)
- Portable consumer products

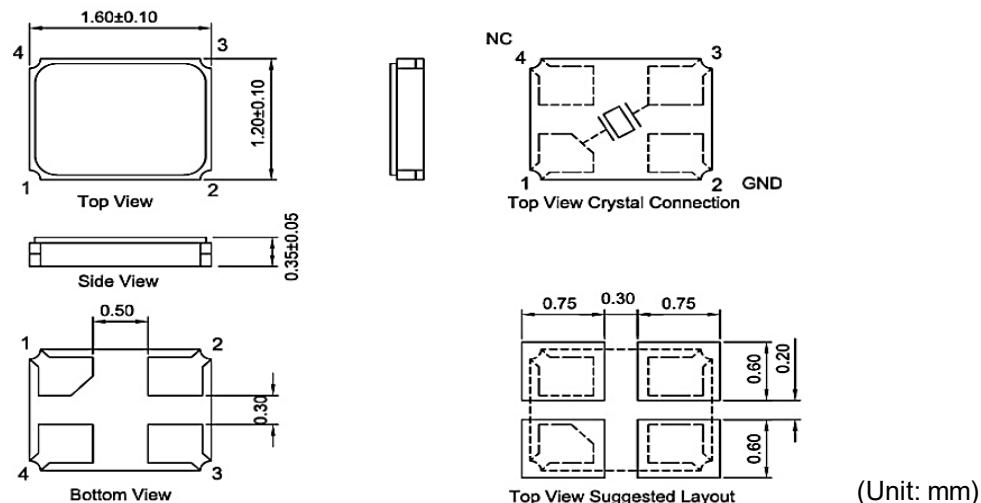
## Electrical Characteristics

| Item   |             | 8Q   | Conditions   |
|--|-------------|--|--|
| Frequency Range  | $F_0$       | 20MHz ~ 66MHz  |  |
| Frequency Tolerance  | $F_{tol}$   | $\pm 30\text{ppm}, \pm 20\text{ppm}, \pm 10\text{ppm}$ | at 25°C  |
| Frequency Stability over<br>Operating Temperature Range<br>(refer to 25°C) | $F_{stab}$  | $\pm 30 \text{ ppm}$                                   | $-20^\circ\text{C} \sim +70^\circ\text{C}$             |
|  |             | $\pm 20 \text{ ppm}$                                   |  |
|  |             | $\pm 10 \text{ ppm}$                                   |  |
|  |             | $\pm 10 \text{ ppm}$                                   | $-30^\circ\text{C} \sim +85^\circ\text{C}$             |
|  |             | $\pm 30 \text{ ppm}$                                   | $-40^\circ\text{C} \sim +85^\circ\text{C}$             |
|  |             | $\pm 20 \text{ ppm}$                                   |  |
|  |             | $\pm 60 \text{ ppm}$                                   | $-40^\circ\text{C} \sim +125^\circ\text{C}$            |
| Operating Temperature Range  | $T_{OTR}$   | $-20^\circ\text{C} \sim +70^\circ\text{C}$             |  |
|  |             | $-40^\circ\text{C} \sim +85^\circ\text{C}$             |  |
|  |             | $-40^\circ\text{C} \sim +125^\circ\text{C}$            |  |
| Shunt Capacitance  | $C_0$       | 3pF Max.   |  |
| Drive Level  | $D_L$       | 1 ~ 200 $\mu\text{W}$ (50 $\mu\text{W}$ Typ.)          |  |
| Load Capacitance   | $C_L$       | 6pF, 7pF, 8pF, 9pF,<br>10pF, 12pF, 16pF, 18pF          |  |
| Aging  | $F_{aging}$ | $\pm 3 \text{ ppm}$ Max.                               | at $25^\circ\text{C} \pm 3^\circ\text{C}$ , first year |
| Storage Temperature Range  | $T_{STR}$   | $-55^\circ\text{C} \sim +125^\circ\text{C}$            |  |

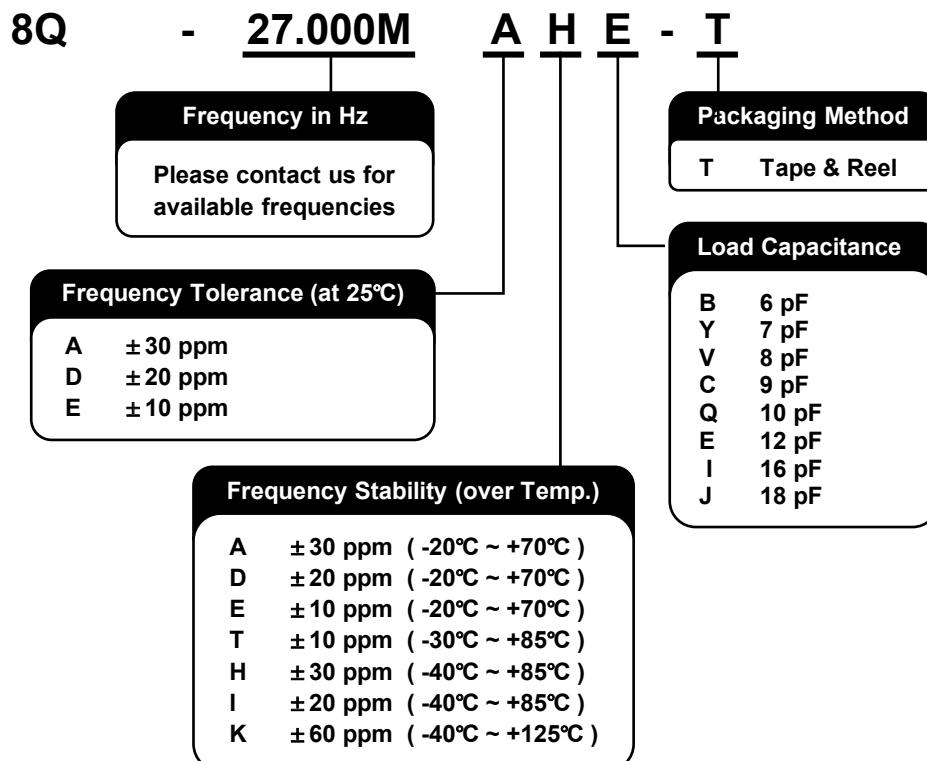
## Motional Resistance (ESR)

| Fundamental |                   |
|-------------|-------------------|
| 20 ~ 30 MHz | 100 $\Omega$ Max. |
| 30 ~ 66 MHz | 80 $\Omega$ Max.  |

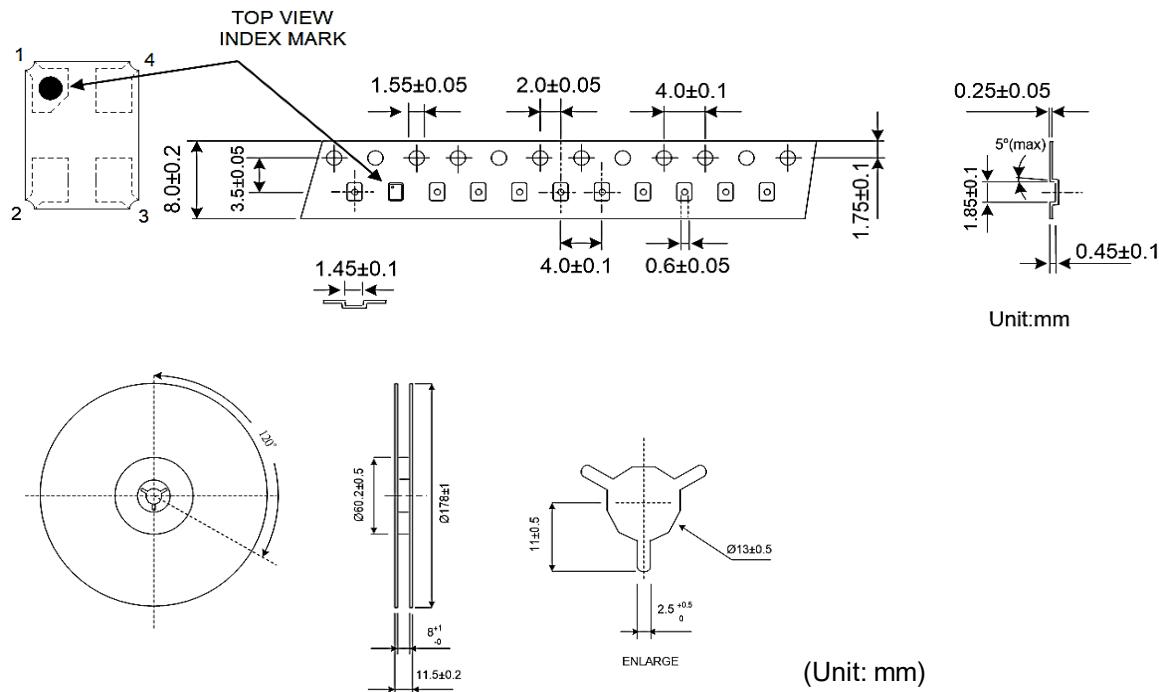
## Dimensions



## Ordering Information



## Packing



## Reflow Profile

Solder melting point :  $220^{\circ}\text{C} \pm 10^{\circ}\text{C}$ , 60 sec. Min.

Peak temperature :  $260^{\circ}\text{C} \pm 10^{\circ}\text{C}$ , 10 sec. Min.

