

## Features

- Frequency range : 8MHz to 54MHz
- Glass sealing, ceramic SMD package
- External dimensions (mm)  
L : 5.0 x W : 3.2 x H : 1.2
- RoHS compliant  
Contains Pb, exempted by RoHS directive

## Applications

- PC, TV, Game, Camera
- Notebook, Hard disk
- Computer peripherals
- Home electronics
- Consumer products

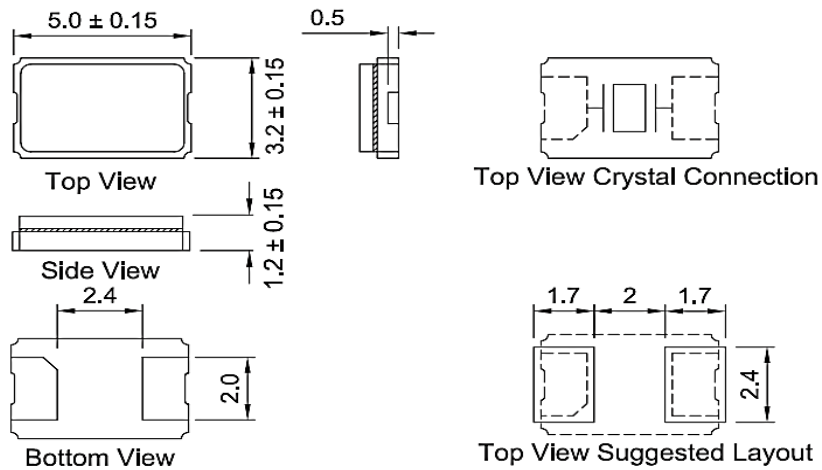
## Electrical Characteristics

| Item                                                                 |             | 7A                                                           | Conditions                                 |
|----------------------------------------------------------------------|-------------|--------------------------------------------------------------|--------------------------------------------|
| Frequency Range                                                      | $F_0$       | 8MHz ~ 54MHz                                                 |                                            |
| Frequency Tolerance                                                  | $F_{tol}$   | $\pm 50\text{ppm}$ , $\pm 30\text{ppm}$ , $\pm 20\text{ppm}$ | at 25°C                                    |
| Frequency Stability over Operating Temperature Range (refer to 25°C) | $F_{stab}$  | $\pm 50\text{ ppm}$                                          | -20°C ~ +70°C                              |
|                                                                      |             | $\pm 30\text{ ppm}$                                          |                                            |
|                                                                      |             | $\pm 20\text{ ppm}$                                          |                                            |
|                                                                      |             | $\pm 50\text{ ppm}$                                          | -40°C ~ +85°C                              |
|                                                                      |             | $\pm 30\text{ ppm}$                                          |                                            |
| Operating Temperature Range                                          | $T_{OTR}$   | -20°C ~ +70°C                                                |                                            |
|                                                                      |             | -40°C ~ +85°C                                                |                                            |
| Shunt Capacitance                                                    | $C_0$       | 5pF Max.                                                     |                                            |
| Drive Level                                                          | $D_L$       | 1 ~ 200μW (100μW Typ.)                                       |                                            |
| Load Capacitance                                                     | $C_L$       | 8pF, 12pF, 16pF, 18pF, 20pF                                  |                                            |
| Aging                                                                | $F_{aging}$ | $\pm 3\text{ ppm Max.}$                                      | at 25°C $\pm 3^\circ\text{C}$ , first year |
| Storage Temperature Range                                            | $T_{STR}$   | -55°C ~ +125°C                                               |                                            |

## Motional Resistance (ESR)

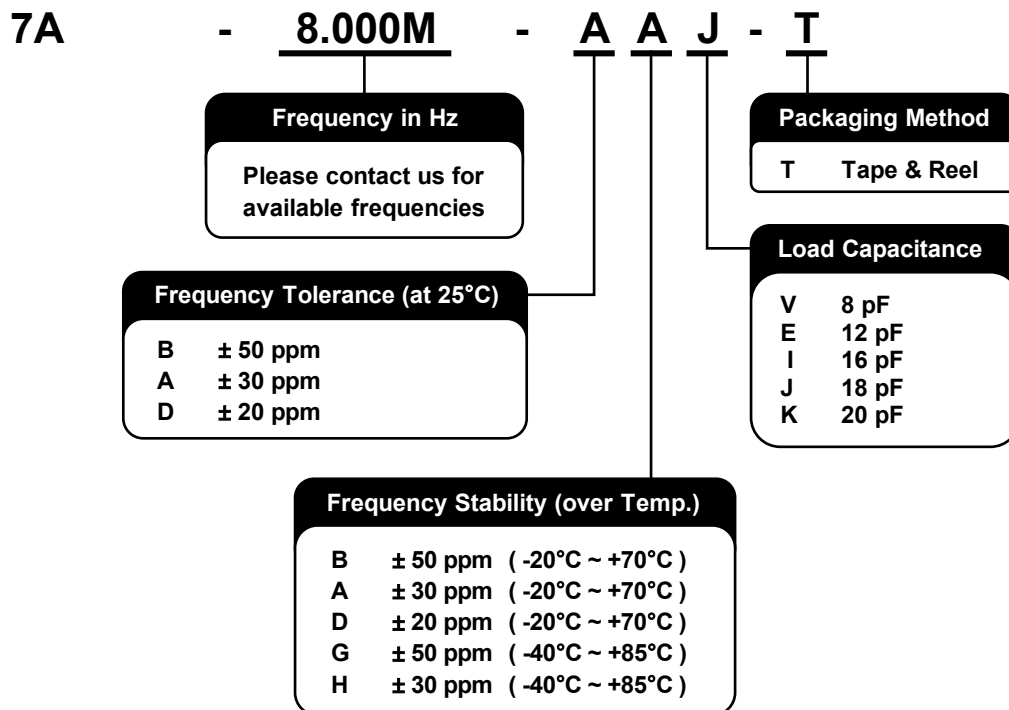
| Fundamental |          |
|-------------|----------|
| 8 ~ 12 MHz  | 80Ω Max. |
| 12 ~ 54 MHz | 50Ω Max. |

## Dimensions

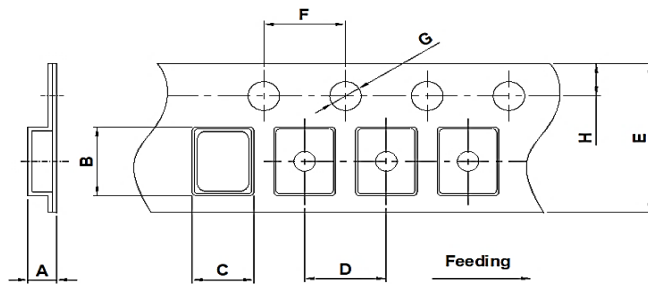


Units: mm

## Ordering Information

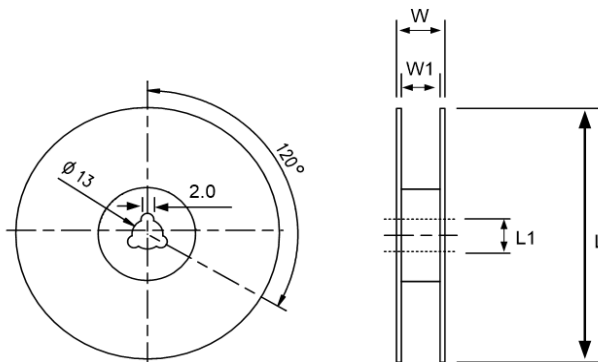


## Packing



| DIMENSIONS | A         | B         | C         | D         | E          | F         | G         | H         |
|------------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|
|            | 1.65±0.10 | 5.40±0.10 | 3.50±0.10 | 8.00±0.10 | 12.00±0.30 | 4.00±0.10 | 1.55±0.10 | 1.75±0.10 |

(Unit: mm)



| DIMENSIONS | L        | L1      | W         | W1      |
|------------|----------|---------|-----------|---------|
|            | 180±1.00 | 13±0.50 | 16.5±0.20 | 12±0.10 |

(Unit: mm)

## Reflow Profile

Solder melting point : 220°C ± 10°C, 60 sec. Min.

Peak temperature : 260°C ± 5°C, 10 sec. Min.

