

# SMD ONE PORT 312.0 MHz SAW RESONATOR



5 x 3.5 x 1.5mm

ASR312A01-SS2

**APPLICATION:** Automotive Electronics/Remote Control

## STANDARD SPECIFICATIONS:

| CHARACTERISTICS          |                                     | UNIT                | MIN.           | TYP.    | MAX.    |
|--------------------------|-------------------------------------|---------------------|----------------|---------|---------|
| Center Frequency Fo      |                                     | MHz                 | 311.925        | 312.000 | 312.075 |
| Insertion Loss           |                                     | dB                  | -              | 1.5     | 2.5     |
| Quality Factor           | Unloaded                            | -                   | -              | 11,800  |         |
|                          | 50Ω loaded                          |                     | -              | 3,500   |         |
| Temperature Stability    | Turnover Temperature                | °C                  | 37             | 25      | 67      |
|                          | Turnover Frequency                  | KHz                 | -              | fo      |         |
|                          | Freq. Temp. Coefficient             | ppm/°C <sup>2</sup> | -              | 0.032   |         |
| Frequency Aging          |                                     | ppm/year            | -              | ±10     |         |
| DC Insulation Resistance |                                     | MΩ                  | 1.0            |         |         |
| RF Equivalent RLC Model  | Motional Resistance R <sub>1</sub>  | Ω                   | -              | 43      | 78      |
|                          | Motional Inductance L <sub>1</sub>  | μH                  | -              | 260.2   |         |
|                          | Motional Capacitance C <sub>1</sub> | fF                  | -              | 2.2     |         |
|                          | Shunt Capacitance C <sub>0</sub>    | pF                  | 2.1            | 2.4     | 2.7     |
| Operating temp.          |                                     | °C                  | -40°C to +85°C |         |         |
| Storage temp.            |                                     | °C                  | -45°C to +85°C |         |         |
| Max. Rating              | DC voltage                          | V                   | 10             |         |         |
|                          | AC voltage                          | V                   | 10 (50Hz/60Hz) |         |         |
| RF Power Dissipation     |                                     | dBm                 | 0              |         |         |

Data measured with: Source Impedance: Z<sub>s</sub>=50Ω, Load Impedance: Z<sub>L</sub>=50Ω, T<sub>A</sub>=25°C

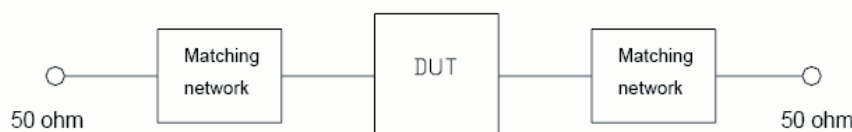
Electrostatic Sensitive Device. Handle with precaution.

## MARKING:

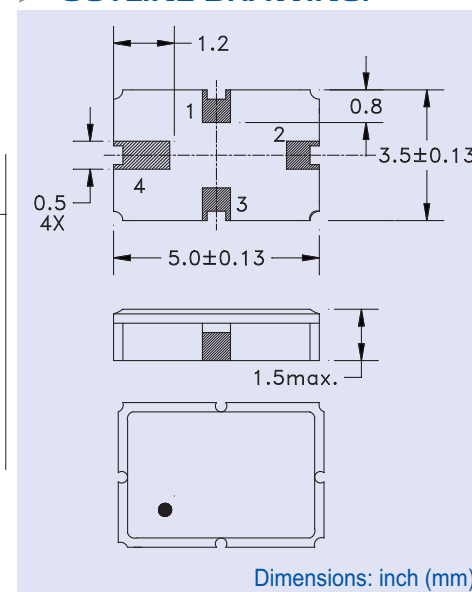
- 312R (312.0 Frequency in MHz)
- AZYX (ZY: Date code Z for month from A to L; Y for year, i.e. 4 for 2004, X: Traceability code)

| PIN NO. | CONNECTIONS |
|---------|-------------|
| 1       | Input       |
| 2       | Case Ground |
| 3       | Output      |
| 4       | Case Ground |

## TEST CIRCUIT:



## OUTLINE DRAWING:



Dimensions: inch (mm)