



**Data Sheet**

telephone  
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BACK

Product Category: SMD Quartz Crystal

| Series Number | Package               | Description        | Last Modified |
|---------------|-----------------------|--------------------|---------------|
| 295           | 2.0 x 1.6mm Chip Type | SMD Quartz Crystal | Jan. 12, 2012 |

**FEATURES**

- 2.0x1.6mm Surface Mount Chip-Type Quartz Crystal
- Ultrathin thickness at 0.5mm
- Automatic mounting and reflow possible.
- RoHS / Lead Free compliant



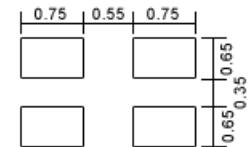
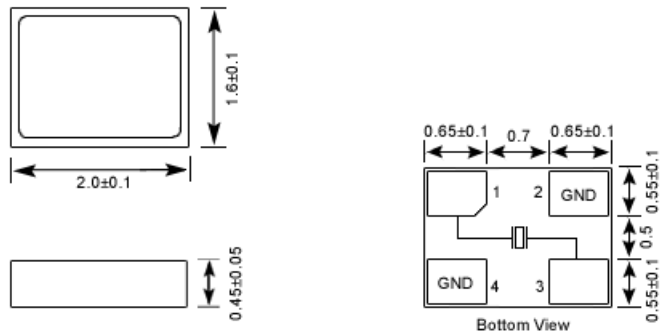
**OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS**

| PARAMETERS                        | VALUE                | UNITS  |
|-----------------------------------|----------------------|--------|
| Frequency Range                   | 20 ~ 80              | MHz    |
| Frequency Tolerance (@ 25°C)      | ±15, ±30, or specify | ppm    |
| Frequency Stability (REF to 25°C) | ±15, ±30, specify    | °C     |
| Operating Temperature             | -10 ~ +60            | °C     |
| Shunt Capacitance                 | 5.0 max              | pF     |
| Load Capacitance                  | 8, 10, or specify    | pF     |
| Vibration Mode                    | AT cut, Fundamental  | -      |
| Aging                             | ±2, ±5               | Ppm/yr |

**EQUIVALENT SERIES RESISTANCE (ESR) AND MODE OF VIBRATION (MODE)**

| PARAMETERS      | MAX ESR (OHM) | MODE        |
|-----------------|---------------|-------------|
| 20.0 ~ 25.0 MHz | 200 max       | Fundamental |
| 26.0 ~ 40.0 MHz | 100 max       | Fundamental |
| 41.0 ~ 80.0 MHz | 60 max        | Fundamental |

**PACKAGE DIMENSIONS**



Recommended Solder Pattern

**PART NUMBER GUIDE**

Example: 295-50.0M-09-30GR-TR

| Series Number             | Frequency                                     | Load Capacitance                                     | Tolerance @ +25°C  | Frequency Stability Over Temp ( °C )   | Operating Temp ( °C )   | Packaging**                     |
|---------------------------|---|--|--|--|---|---------------------------------|
| 295                       | 50.0M   | 9  | 30   | G  | R   | TR                              |
| Oscilent<br>2.0 x 1.6 SMD | Enter desired frequency.<br>Avail. = 20 ~ 80M | Enter desired capacitance here.<br>Avail. = 8 ~ 10pF | Blank *<br>= ±30 PPM<br>10 = ±10 PPM<br>15 = ±15 PPM<br>20 = ±20 PPM<br>25 = ±25 PPM<br>50 = ±50 PPM<br>Avail. = ±15 ~ ±30 | Blank* = ±50 PPM<br>G = ±30 PPM<br>H = ±20 PPM<br>K = ±15 PPM<br>L = ±10 PPM<br>N = ±5 PPM<br>M = ±100 PPM<br>Avail. = ±15 ~ ±30 | P = 0~+50<br>R = -10~+60<br>S = -20~+70<br>T = -30~+80<br>W = -40~+85 | Blank* = Bulk<br>TR = Tape/Reel |

**NOTE:** Deviations on all parameters available. Please consult Oscilent for details.

**DEFINITIONS:** Click on the characteristic names above for definitions of that particular characteristic.

**\*STANDARDS:** "Blank" part number selections indicate standard variables for that particular characteristic.

**\*\*PACKAGING:** Click on the packaging name above for tape/reel specifications

## STANDARD FREQUENCIES

FOR GUIDE ONLY/ OTHER FREQ. AVAILABLE

| FREQUENCY (MHz) | FREQUENCY (MHz) |
|-----------------|-----------------|
| 20.00           | 27.120          |
| 24.00           | 30.00           |
| 24.5454         | 30.400          |
| 25.00           | 32.00           |
| 26.00           | 36.00           |
| 27.00           | 40.00           |

**NOTE:** Other frequencies available. Please consult Oscilent for part numbers.

**Oscilent Corporation** - CALL **1.949.252.0522**

**Series No.:** 295

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