

**Data Sheet**

telephone

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BACK

Product Category: SMD Quartz Crystal

Series Number	Package	Description	Last Modified
294	8.0 x 4.5 Chip Type	SMD Quartz Crystal	Nov. 17, 2011

FEATURES

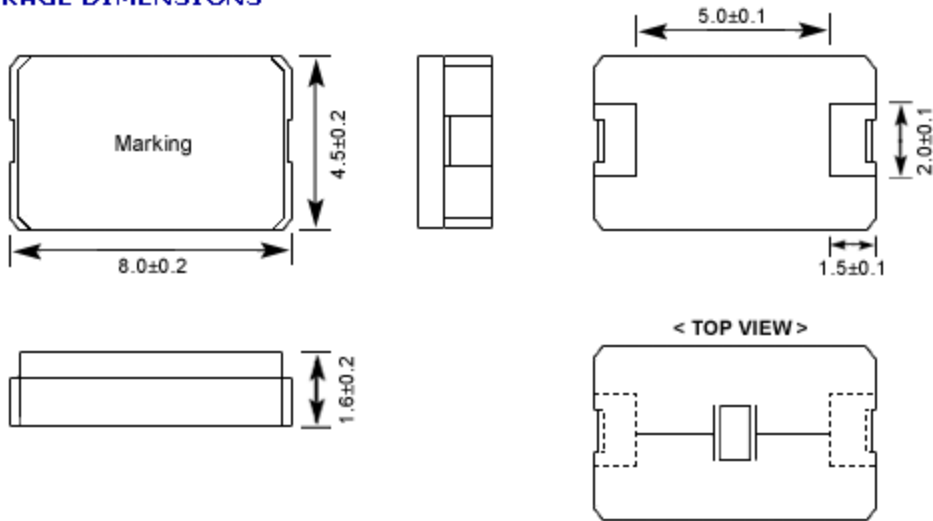
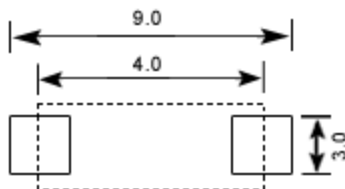
- 8x4.5mm Surface Mount Chip-Type Quartz Crystal
- Ultrathin thickness (1.6mm) available.
- Automatic mounting and reflow are possible.
- Very small volume and weight.
- RoHS / Lead Free compliant

**OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS**

PARAMETERS		VALUE	UNITS
Frequency Range	Fundamental	6.0 ~ 40.0	MHz
	3rd	30.0 ~ 75.0	
Vibration Mode		AT cut, Fundamental, 3rd	-
Frequency Tolerance (@ 25°C)		±30 or ±50	-
Frequency Stability over Operating Temp		±30 or ±50	ppm
Operating Temperature		-10 ~ +60, or specify	°C
Shunt Capacitance		7.0 max	pF
Load Capacitance		16, 18, 20, or specify	pF
Aging		±5	ppm/year

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

PARAMETERS	MAX ESR (OHM)	MODE
6.0 ~ 10.0MHZ	100 max	Fundamental
11.0 ~ 14.0 MHz	80 max	Fundamental
14.0 ~ 20.0 MHz	50 max	Fundamental
21.0 ~ 40.0 MHz	40 max	Fundamental
30.0 ~ 75.0 MHz	80 max	3rd

PACKAGE DIMENSIONS**RECOMMENDED SOLDERING PATTERN****PART NUMBER GUIDE**

Example: 294-10.0M-30GR-TR

Series Number	Frequency	Load Capacitance	Tolerance @ +25°C	Frequency Stability Over Temp (°C)	Operating Temp (°C)	Packaging**
294	10.0M	18	30	G	R	TR
Oscilent 2.5 x 2 SMD	Enter desired frequency. Avail. = 6 ~ 40.0M	Enter desired capacitance here. Avail. = 16pF, 18pF, 20pF, or specify	Blank* = ±30 PPM 10 = ±10 PPM 15 = ±15 PPM 20 = ±20 PPM 25 = ±25 PPM 50 = ±50 PPM Avail. = ±30, ±50	Blank* = ±50 PPM G = ±30 PPM H = ±20 PPM K = ±15 PPM L = ±10 PPM N = ±5 PPM M = ±100 PPM Avail. = ±30, ±50	P = 0~+50 R = -10~+60 S = -20~+70 T = -30~+80 W = -40~+85	Blank* = Bulk TR = Tape/Reel
<p>NOTE: Deviations on all parameters available. Please consult Oscilent for details.</p> <p>DEFINITIONS: Click on the characteristic names above for definitions of that particular characteristic.</p> <p>*STANDARDS: "Blank" part number selections indicate standard variables for that particular characteristic.</p> <p>**PACKAGING: Click on the packaging name above for tape/reel specifications</p>						

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Series No.: 294

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