



SMD Quartz Crystal

7050, 6035, 5032

Features

- Wide Frequency range from 6 MHz upto 200 MHz
- RoHS Compliant
- Automotive Application

Table 1: General Specifications

Parameter/ Package	7050	6035	5032
Frequency Range	6 MHz ~ 200 MHz	8 MHz ~ 125 MHz	8 MHz ~ 125 MHz
Mode of Oscillation	Fundamental & Overtone	Fundamental & Overtone	Fundamental & Overtone
Frequency Tolerance at 25°C	Select from Table 3		
Operating Temperature Range (OTR)	Select from Table 4		
Temperature Stability	Select from Table 4		
Equivalent Series Resistance (ESR)	Select from Table 2		
Drive Level	10 μ Watts (typ.) 100 μ Watts (max.)		
Resonance Condition	XXS – Series, XXP – Parallel with xx pF (for parallel, please specify the xx value in pF)		
Storage Temperature	-50°C to +105°C		
Aging @ 25°C	± 3 ppm/ Year (max.)		

Table 2: Mode of Oscillation/ Equivalent Series Resistance

7050			6035			5032		
Frequency Range (MHz)	Mode of Oscillation	ESR (max.)	Frequency Range (MHz)	Mode of Oscillation	ESR (max.)	Frequency Range (MHz)	Mode of Oscillation	ESR (max.)
6.0 ~ 7.9	Fundamental	80 Ω	8.0 ~ 11.9	Fundamental	80 Ω	8.0 ~ 9.9	Fundamental	150 Ω
8.0 ~ 10.9	Fundamental	60 Ω	12.0 ~ 15.9	Fundamental	60 Ω	10.0 ~ 14.9	Fundamental	80 Ω
11.0 ~ 13.9	Fundamental	50 Ω	16.0 ~ 50.0	Fundamental	40 Ω	15.0 ~ 19.9	Fundamental	50 Ω
14.0 ~ 49.9	3 rd Overtone	80 Ω				20.0 ~ 52.0	Fundamental	40 Ω
50.0 ~ 200.0	3 rd Overtone	90 Ω				40.0 ~ 200.0	3 rd Overtone	80 Ω

Table 3: Frequency Tolerance at 25°C

Code	Tolerance	Code	Tolerance
D	± 10 ppm	H	± 30 ppm
E	± 15 ppm	M	± 50 ppm
F	± 20 ppm	K	± 100 ppm
G	± 25 ppm	N	± 150 ppm

Table 4: Temperature Stability

OTR Code	Stability Code		D	E	F	G	H	M	K	N
	Temperature Stability		± 10 ppm	± 15 ppm	± 20 ppm	± 25 ppm	± 30 ppm	± 50 ppm	± 100 ppm	± 150 ppm
D	Operating Temperature Range (OTR)	-10°C to +60°C								
F		0°C to +70°C								
G		-30°C to +80°C								
H		-30°C to +85°C								
I		-40°C to +85°C								
L		-55°C to +125°C								
J4		-40°C to +150°C								

Table 5: Environmental Specifications

Vibration	Frequency: 20 Hz ~ 200 Hz Amplitude: 1.52 mm peak, Acceleration: 20g Vibration waveform: Sine waveform Duration: 4 minutes each, 4 Cycles, 3 directions (X, Y, Z)
Drop Test	Method of Drop: Free Drop Dropping Floor: Hard wood board, 3cm/ min. Height: 75 cm ± 1 cm No. of Drops: 3

Denotes Available Denotes not Available

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Mechanical Specifications:

	7050	6035	5032
Top View			
Side View			
Bottom View			

Chamfered pad is pad no. 4

Chamfered pad is pad no. 1 or pad no. 3

Chamfered pad is pad no. 1 or pad no. 2

▲ All dimensions are in mm.
Tolerance is ± 0.1 mm,
unless otherwise specified.

Pad Connections:
Pad 1, 3: Crystal
Pad 2, 4: Ground

Ordering Information

Example

7050	D	D	D	1	12P	A	010M000000
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Series

Tolerance: ± 10 ppm

OTR: -10°C to 60°C

Stability over OTR: ± 10 ppm

Freq. 10 MHz

A: Automotive Application

Resonance Condition
XXS: Series
12P: Parallel with 12 pF

Mode: 1: Fundamental
3: 3rd overtone

Specifications subject to change without prior notice

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Note: Not all combination of options are available. Other specifications may be available upon request.

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