

BFC CRYSTAL SERIES

HC-49SMD/ HC49USSMD PACKAGE



- RoHS Compliant
- Surface Mount (SMD) Package
- Low Profile (3.0mm HC49SM/4.0mm HC49SSM)
- Popular Low Cost Microprocessor Crystals
- Industry Standard SMD Footprint
- AT-Cut Crystal (BT Available) with Excellent Aging
- Extended Temperature Range(-40~+85°C) Available
- Tape and Reel Packaging Available

ELECTRICAL SPECIFICATIONS

Holder Types	HC-49SMD / HC49USMD / HC49SMD4	
Resonance Mode	Fundamental (3.5 to 36.0 MHz)	3 rd Overtone (27.0 to 70.0MHz)
Nominal Frequency Range	3.5 to 70.000 MHz	
Calibration Tolerance @ 25°C	± 50ppm, ± 30ppm, ± 20ppm, ± 15ppm, ± 10ppm	
Frequency Stability Reference @25°C	± 100ppm, ± 50ppm, ± 30ppm	
Operating Temperature Range	0-70°C,	
Load Capacitance (CL)	10pF to 32pF or Series	
Equivalent Series Resistance	See The Maximum Equivalent Series Resistance Table Below	
Drive Level	0.01 – 1mW	
Shunt Capacitance	< 7.0pF	
Aging	± 5ppm Maximum	
Crystal Cut	AT Strip (BT Available)	

PART NUMBERING SYSTEM

Model	Frequency	Load (Cl)	Package	Stability @ 25°C	Stability / Temp	Operate Temp.
BFC	143 = 14.31818	S = Series	5B = HC49SMD	0 = ± 100ppm	0 = 100ppm	A = 0-70°C
Click Here for Standard Crystal Frequencies Abbreviations Page		10pF-32pF	5C = HC49SSMD	5 = ± 50ppm	5 = 50ppm	B = -10~+60°C
			5D = HC49SMD4	3 = ± 30ppm	3 = 30ppm	C = -20~+70°C
			5E = HC49SMD4	2 = ± 20ppm	2 = 20ppm	D = -40~+85°C
				1 = ± 10ppm	1 = 10ppm	

EQUIVALENT SERIES RESISTANCE (MAXIMUM)

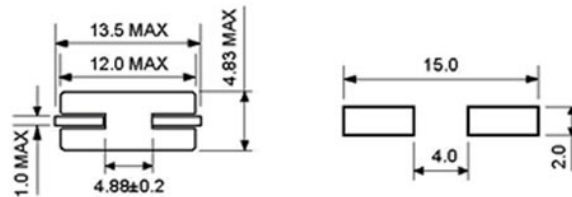
Frequency Range	ESR (Ohms)	Mode	Frequency Range	ESR (Ohms)	Mode
3.5 to 3.999 MHz	200	Fundamental	9.000 to 12.999 MHz	60	Fundamental
4.0 to 4.999 MHz	150	Fundamental	13.000 to 15.999 MHz	50	Fundamental
5.0 to 5.999 MHz	120	Fundamental	16.000 to 19.999 MHz	40	Fundamental
6.0 to 6.999 MHz	100	Fundamental	20.000 to 36.0 MHz	30	Fundamental
7.0 to 8.999 MHz	80	Fundamental	27.0 to 70.0 MHz	100	3 rd OT

HC49SMD / HC49USSMD

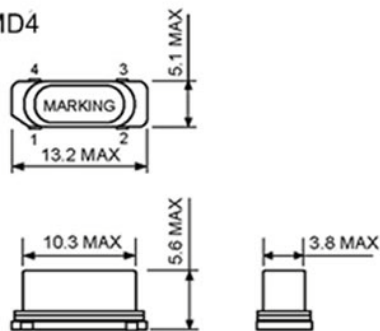


5B(HC49SMD):H = 4.5 Max.
5C(HC49SSMD):H = 3.2 Max.

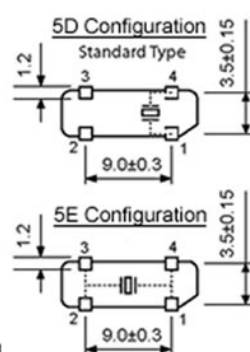
Recommended Solder Pad Layout



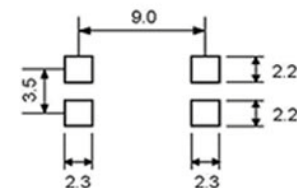
HC49SMD4



ALL Dimensions Are Typical Unless Otherwise Specified



Recommended Solder Pad Layout



ALL Dimensions In Millimeters (mm)