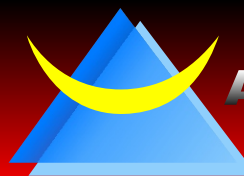


CSME1(2)(3)(4) SERIES

- HC-49/US SMD Epoxy Base Crystal
- AT Cut or BT Cut
- Resistance Weld
- Industry Standard Package



ASCEND

FREQUENCY DEVICES

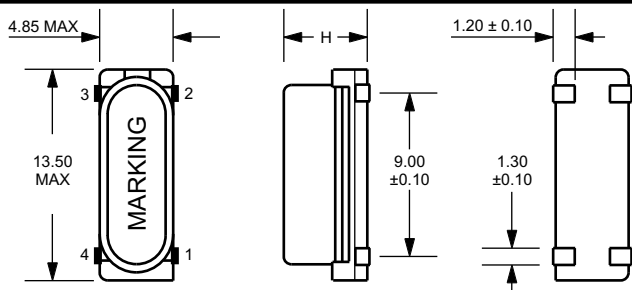
Electrical Specifications

Frequency Range:	3.200MHz to 91.730MHz
Frequency Tolerance/Stability:	Select from options below
Operating Temperature Range:	Select from options below
Storage Temperature Range:	-55°C to +125°C
Aging:	±5ppm / first year Maximum
Shunt Capacitance:	7pF Maximum
Load Capacitance:	Select from options below
Equivalent Series Resistance:	See ESR Table Below
Mode of Operation:	Fundamental or 3rd Overtone
Drive Level:	1mWatts Maximum
Shock:	MIL-STD-883, Method 2002, Cond B
Solderability:	MIL-STD-883, Method 2003
Solvent Resistance:	MIL-STD-202, Method 215
Vibration:	MIL-STD-883, Method 2007, Cond A
Gross Leak Test:	MIL-STD-883, Method 1014, Cond C
Fine Leak Test:	MIL-STD-883, Method 1014, Cond A

Equivalent Series Resistance Table

Frequency Range	ESR (Ohms)	Mode / Cut	Frequency Range	ESR (Ohms)	Mode / Cut
3.200MHz to 4.999MHz	200 Maximum	Fundamental / AT	17.000MHz to 24.999MHz	40 Maximum	Fundamental / AT
5.000MHz to 5.999MHz	150 Maximum	Fundamental / AT	25.000MHz to 36.000MHz	25 Maximum	Fundamental / AT
6.000MHz to 7.999MHz	120 Maximum	Fundamental / AT	24.000MHz to 40.000MHz	80 Maximum	Fundamental / BT
8.000MHz to 8.999MHz	90 Maximum	Fundamental / AT	24.000MHz to 34.999MHz	100 Maximum	Third Overtone / AT
9.000MHz to 9.999MHz	80 Maximum	Fundamental / AT	35.000MHz to 59.000MHz	80 Maximum	Third Overtone / AT
10.000MHz to 16.999MHz	50 Maximum	Fundamental / AT	60.000MHz to 91.730MHz	60 Maximum	Third Overtone / AT

Mechanical Dimensions



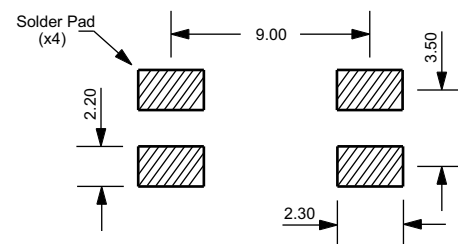
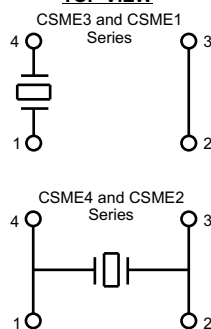
MARKING

Line 1: (X)XX.XXX
(X) = Internal Factory Code

"H" (HEIGHT)

CSME1 and CSME2 = 5.00 MAX
CSME3 and CSME4 = 4.00 MAX

TOP VIEW



ALL DIMENSIONS
IN MILLIMETERS

Part Numbering Guide

CSME1 A A 1 20 1 - 33.000M - TR

Series

CSME1 and CSME2 = HC-49/US SMD 5.00mm
CSME3 and CSME4 = HC-49/US SMD 4.00mm

Frequency Tolerance

A = ±5ppm E = ±25ppm
B = ±10ppm F = ±30ppm
C = ±15ppm G = ±50ppm
D = ±20ppm H = ±100ppm

Frequency Stability

A = ±5ppm E = ±25ppm
B = ±10ppm F = ±30ppm
C = ±15ppm G = ±50ppm
D = ±20ppm H = ±100ppm

Temperature Range

1 = -10°C to +60°C
2 = -20°C to +70°C
3 = -40°C to +85°C

Packaging

Blank = Bulk
TR = Tape and Reel

Frequency

Mode of Operation

1 = AT Fundamental
2 = BT Fundamental
3 = 3rd Overtone

Load Capacitance

SR = Series 16 = 16pF
08 = 8pF 18 = 18pF
09 = 9pF 20 = 20pF
10 = 10pF 32 = 32pF
12 = 12pF XX = Other

Not all temperature/stability options are available. Please consult with factory for current capabilities

(CR/06,07,08,09) (Rev. B / 11-27-06)

Specifications subject to change without notice