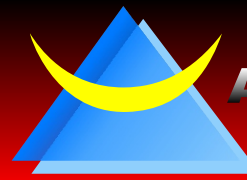


# CSMC6 SERIES

- SMD Ceramic 4mm x 2.5mm (4Pad)
- Wide Frequency Range
- Tight Tolerance and Stability
- RoHS Compliant



**ASCEND**

FREQUENCY DEVICES

## Electrical Specifications

Frequency Range:	12.000MHz to 40.000MHz
Frequency Tolerance/Stability:	Select from options below
Operating Temperature Range:	Select from options below
Storage Temperature Range:	-55°C to +125°C
Aging:	±1.0ppm/year
Shunt Capacitance:	3.0pF Maximum
Load Capacitance:	Select from options below
Equivalent Series Resistance:	See ESR Table Below
Mode of Operation:	Fundamental
Drive Level:	10µWatts Typical, 100µW Maximum
Insulation Resistance:	500 Megaohms Minimum at DC 100V

## Equivalent Series Resistance Table

Frequency Range	ESR (Ohms)	Mode / Cut	Frequency Range	ESR (Ohms)	Mode / Cut
12.000MHz to 16.000MHz	70 Maximum	Fundamental / AT	32.001MHz to 40.000MHz	20 Maximum	Fundamental / AT
16.001MHz to 32.000MHz	50 Maximum	Fundamental / AT			

## Mechanical Dimensions

**Solder Pad Layout**

**Pin Connection**

1 Crystal	3 Crystal
2 Case Ground	4 Case Ground

**MARKING**  
 Line 1: AXX.XXX  
 Line 2: XXXXXX (Date Code)

ALL DIMENSIONS IN MILLIMETERS

## Part Numbering Guide

**CSMC6 A A 1 20 1 - 33.000M - TR**

### Series

Ceramic SMD Crystal (4mm x 2.5mm, 4 Pad)

### Frequency Tolerance

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

### Frequency Stability

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

### Temperature Range

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

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

### Packaging

Blank = Bulk  
 TR = Tape and Reel

### Frequency

### Mode of Operation

1 = AT Fundamental

### Load Capacitance

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

