

PART NUMBERING GUIDE **Environmental/Mechanical Specifications on page F5**

FMT11 D 20 C 1 29.4912MHz

| | |
|--|---|
| <p>Package</p> <p>F = 1.3mm max. ht. / Ceramic Glass Sealed Package F11 = 1.1mm max. ht. / Ceramic Glass Sealed Package FMT = 1.3mm max. ht. / Seam Weld "Metal Lid" Package FMT11 = 1.1mm max. ht. / Seam Weld "Metal Lid" Package</p> <p>Tolerance/Stability</p> <p>A=±50/100 G=±20/10 B=±50/50 H=±10/10 C=±30/50 J=±10/20 D=±20/30 E=±15/30 F=±10/50</p> | <p>Mode of Operation</p> <p>1=Fundamental 3=Third Overtone 5=Fifth Overtone</p> <p>Operating Temperature Range</p> <p>C=0°C to 70°C E=-20°C to 70°C F=-40°C to 85°C</p> <p>Load Capacitance</p> <p>S=Series, XX=XXpF (Pico Farads)</p> |
|--|---|

ELECTRICAL SPECIFICATIONS **Revision: 1996-D**

| | |
|--|--|
| Frequency Range | 8.000MHz to 150.000MHz |
| Frequency Tolerance/Stability A, B, C, D, E, F | See above for details! Other Combinations Available. Contact Factory for Custom Specifications. |
| Operating Temperature Range "C" Option, "E" Option, "F" Option | 0°C to 70°C, -20°C to 70°C, -40°C to 85°C |
| Aging @ 25°C | ±3ppm / year Maximum |
| Storage Temperature Range | -55°C to 125°C |
| Load Capacitance "S" Option "XX" Option | Series 8pF to 50pF |
| Shunt Capacitance | 7pF Maximum |
| Insulation Resistance | 500 Megaohms Minimum at 100Vdc |
| Drive Level | 1mW Maximum, 100uW correlation |

EQUIVALENT SERIES RESISTANCE (ESR)

| Frequency (MHz) | ESR (ohms) | | Frequency (MHz) | ESR (ohms) |
|------------------|------------|--|---------------------------|------------|
| 9.000 to 10.999 | 60 | | 35.000 to 39.990 (3rd OT) | 60 |
| 11.000 to 13.999 | 50 | | 40.000 to 49.990 (3rd OT) | 60 |
| 14.000 to 15.999 | 40 | | 50.000 to 89.999 (3rd OT) | 60 |
| 16.000 to 40.000 | 30 | | 90.000 to 150.000 | 100 |

MECHANICAL DIMENSIONS **Marking Guide**

All Dimensions in mm.

Top view: 5.00 ±0.20, 7.00 +0.30 -0.20, "H Dimension", Ceramic Base all

Side view: 2.54 ±0.20, 4.60 ±0.20, 1.00 ±0.20 (X4)

Pad view: 4, 1, 3, 2

Line 1: Frequency
Line 2: CEI YM
 CEI = Caliber Electronics
 YM = Date Code (year/month)

Pad Connection

1 Crystal In/OUT
 2 Ground
 3 Crystal in/OUT
 4 Ground

NOTE: Dimensions for Specific Packages

H = 1.3 Maximum for "F Series"
 H = 1.3 Maximum for "FMT Series" / "Metal Lid"
 H = 1.1 Maximum for "F11 Series"
 H = 1.1 Maximum for "FMT11 Series" / "Metal Lid"