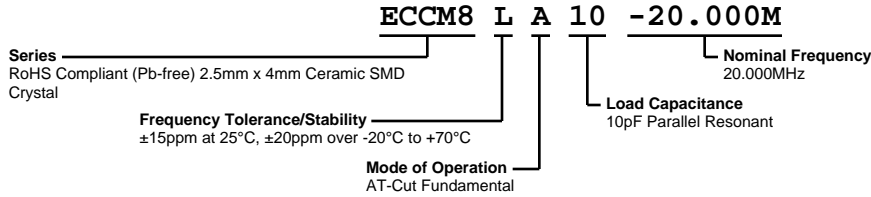


# ECCM8LA10-20.000M



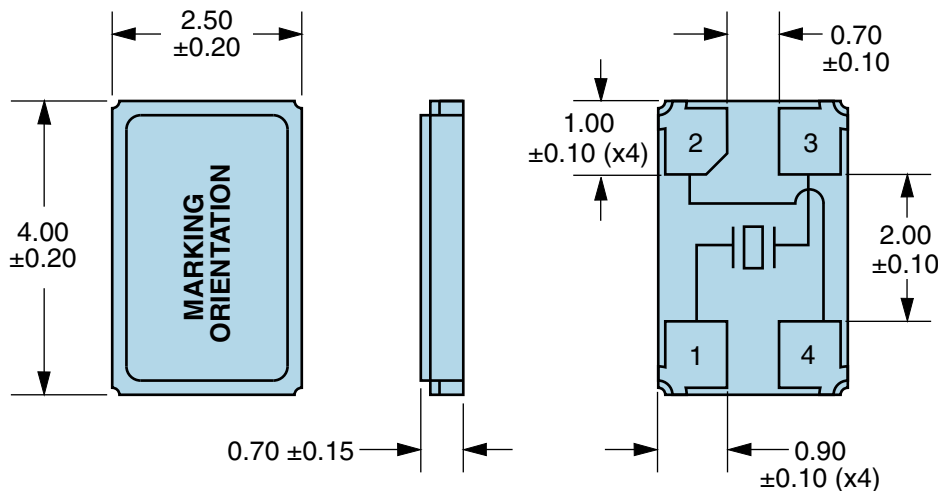
## ELECTRICAL SPECIFICATIONS

Nominal Frequency	20.000MHz
Frequency Tolerance/Stability	$\pm 15\text{ppm}$ at 25°C, $\pm 20\text{ppm}$ over -20°C to +70°C
Aging at 25°C	$\pm 3\text{ppm/Year}$ Maximum
Load Capacitance	10pF Parallel Resonant
Shunt Capacitance (C0)	5pF Maximum
Equivalent Series Resistance	60 Ohms Maximum
Mode of Operation	AT-Cut Fundamental
Drive Level	100μWatts Maximum, 10μWatts Correlation
Crystal Cut	AT-Cut
Spurious Response	>3dB from Fo to Fo+5000ppm
Drive Level Dependency (DLD2)	20% of Maximum ESR Limit (from 1μWatt to 100μWatt)
Insulation Resistance	500 Megaohms Minimum at 100Vdc

## ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

ESD Susceptibility	MIL-STD-883, Method 3015, Class 1, HBM: 1500V
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Flammability	UL94-V0
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003
Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A

## MECHANICAL DIMENSIONS (all dimensions in millimeters)



PIN	CONNECTION
1	Crystal
2	Cover/Ground
3	Crystal
4	Cover/Ground

LINE	MARKING
1	<b>E20.0</b> E=Ecliptek
2	<b>XXXXX</b> XXXXX=Ecliptek Manufacturing Identifier