

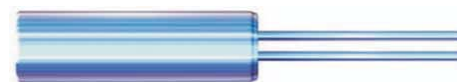


FEATURE

- Wide Frequency range
- High shock tolerance
- Small size
- Reliable frequency stability

APPLICATIONS

- Microprocessor Systems
- Consumer Electronics
- Instrumentation
- Automotive electronics



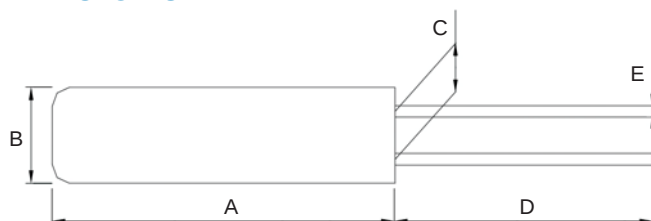
ELECTRICAL SPECIFICATIONS

Frequency Range	Φ3x10	Φ3x8 / Φ3x9
	3.579MHz ~ 4.000MHz	4.000MHz ~ 70.000MHz
Frequency Tolerance(at 25°C)	±10ppm to ±100ppm	
Frequency Stability	±10ppm to ±100ppm	
Load Capacitance(C _L)	20pF, or specify	
Equivalent Series Resistance	See Below Table	
Operating Temperature Range	-10°C to +60°C, -20°C to +70°C, -40°C to +85°C	
Storage Temperature Range	-40°C to +85°C	
Aging @25°C 1 st year (Max)	±5ppm/year	
Shunt Capacitance(C ₀)	1.35pF Typ	5.0pF Max
Drive Level(Typical)	1 μW Max	100 μW Max
Insulation Resistance	500M Ω Min at DC100V	

EQUIVALENT SERIES RESISTANCE(ESR) AND OSCILLATION MODE

Frequency(MHz)	E.S.R(Ω)	Mode	Frequency(MHz)	E.S.R(Ω)	Mode
3.579~3.999	150Max	Fundamental	10.000~26.999	50Max	Fundamental
4.000~5.999	120Max	Fundamental	27.000~35.999	100Max	3rd Overtone
6.000~9.999	80Max	Fundamental	36.000~70.000	80Max	3rd Overtone

DIMENSIONS



Model	A	B	C	D	E
3x8mm	8.3	Φ3.1	0.8	10.0	0.3
3x9mm	9.3	Φ3.1	0.8	10.0	0.3
3x10mm	10.1	Φ3.1	0.8	10.0	0.3

PART NUMBER

GMK-AT-38-	16.000	-	30	-	20	-	40	-	A
-AT-39-	Frequency		Frequency		Load		E.S.R. Max		Operating
-AT-310-	e.g:		Tolerance		Capacitance		e.g:		Temperature
	16.000		e.g:		e.g:20:20pF		40:40 Ω Max		Range A:-10~60°C
	:16.000MHz		30:±30ppm						B:-20~70°C
									C:-40~85°C