

RESISTANCE WELDED MINIATURE CRYSTAL UNITS

UM-1 & UM-5 Series

Electrical Specifications

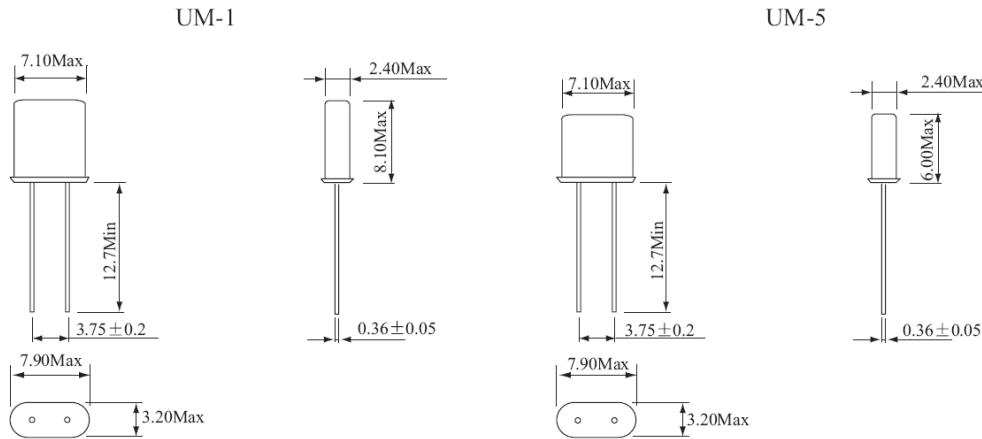
Parameter	Symb	Condition	Min	Typ	Max	Units
Frequency Range	F ₀		10		125	MHz
Frequency Tolerance	ΔF/ F ₀	AT 25 °C		±10	±50	ppm
Temperature Stability	TC	See table 1		±10	±50	ppm
Operating Temperature Range	T _{OPR}	See table 1				°C
Storage Temperature Range	T _{STG}		-40		+85	°C
Shunt Capacitance	C ₀				7	pF
Load Capacitance	CL	Customer Specified	10		Series	pF
Insulator Resistance	IR	100V _{DC}	500			MΩ
Drive Level	DL			100	500	μW
Aging	F _a	AT 25 °C, per year	-5.0		+5.0	ppm

Equivalent Series Resistance(ESR) and Mode of Vibration(Mode)

Frequency Range(MHz)	Max ESR(Ω)	Mode
10.000 to 12.999	60	Fundamental
13.000 to 19.999	40	Fundamental
20.000 to 29.999	30	Fundamental
30.000 to 39.999	60	3 rd Overtone
40.000 to 59.999	50	3 rd Overtone
60.000 to 79.999	50	3 rd Overtone
80.000 to 125.000	100	5 th Overtone

Temp Range(°C)	Frequency Stability(PPM)					
	±5	±10	±15	±20	±30	±50
0 to 50	✓	✓	✓	✓	✓	✓
-10 to 60	✓	✓	✓	✓	✓	✓
-20 to 70		✓	✓	✓	✓	✓
-40 to 85				✓	✓	✓

Mechanical Dimensions(mm)



UM5-A20C18-32K768

Package	Frequency Stability	Frequency Tolerance	Operating temperature Range	Load Capacitance	Nominal Frequency (In MHz)
HC49U	A=±10ppm	10=±10ppm	A=0 to +70°C	00=series	25M000=25.000MHz
HC49S	B=±20ppm	20=±20ppm	B=-20 to +70°C	10=10pF	32K768=32.768KHz
AT26	C=±30ppm	30=±30ppm	C=-40 to +85°C	18=18pF	
AT39	D=±50ppm	50=±50ppm	D=-40 to +105°C	32=32pF	
UM1	E=±100ppm	100=±100ppm			
UM5					

Through Hole Crystal Units Part Numbering System