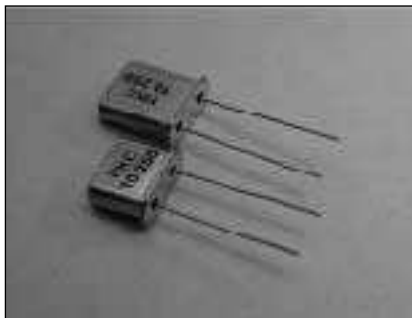


UM SERIES THRU HOLE

Type: 1U, 5U



APPLICATION:

- Computers, Modems, and Networking
- Telecommunication
- Industrial
- Consumer Electronics

OPTIONS:

- Height of Lead Type: 1U=8.00mm, 5U=6.00mm
- Paper Tape & Reel Packing/ Ammo Packing
- Laser Marking or Ink Marking
- Tailor Made Spec. Or Designer Spec Welcome

FEATURES:

- High Reliability, Low Cost Crystal
- Tight Stability & Extended Temperature Available

STANDARD SPECIFICATION

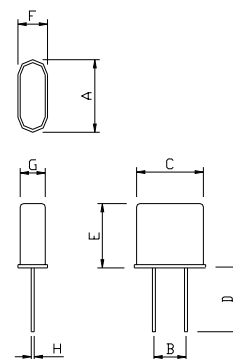
Frequency Range	1U 3.51 MHz-200MHz				5U 8 MHz-200MHz			
	AT Cut Fundamental 3.579545 MHz~50MHz	AT Cut 3 rd Overtone 26MHz~100MHz	AT Cut 5 th Overtone colamn 60MHz~150MHz	AT Cut 7 th Overtone 150MHz~200MHz	AT Cut Fundamental 12.01MHz~50MHz	At Cut 3 rd Overtone 26MHz~100MHz	AT Cut 5 th Overtone colamn 60MHz~150MHz	AT Cut 7 th Overtone 150MHz~200MHz
Equivalent Series Resistance ESR/RS (Measured at Series Resonance)	3.579545~7.999MHz: 120 Ohm 8.00~9.999MHz: 80 Ohm 10.000~17.999MHz: 40 Ohm 18.000~50.000MHz: 30 Ohm	45 Ohm	100Ohm	150Ohm	100Ohm	120~200Ohm	100Ohm	150Ohm
Frequency Tolerance at 25°C	±30PPM is standard, but tight tolerances also available for certain frequencies							
Frequency Stability Over Operating Temperature Range	±50PPM is standard, but tight tolerances also available for certain operating temperature range.							
Operating Temperature Range	-10~+60°C is standard, but can be extended to -55~+125°C							
Load Capacitance	8pF~∞ pF (∞ pF mean series Resonance). To be specified by customer							
Drive Level	50μW is standard, 0.001μW to 1000μW also available							
Ageing	±5PPM per year is standard, but ±1 PPM also available							
Shunt Capacitance	7pF Maximum							
Pullability	May be specified by customer in terms of frequency shift required over a certain range of load capacitance, (e.g. +100PPM from CL= 12pF to CL=18pF)							

* Specification subject to change without prior notice.

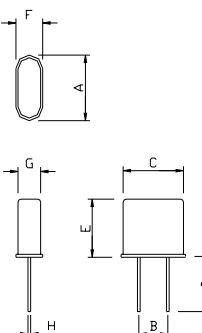
ORDERING INFORMATION

Type	Frequency	Tolerance at 25°C	Load Capacitance	Mode	T.C. Range	T.C. Tolerance																				
1U~ 8.00mm 5U~ 6.00mm	A=±5 L=±70 B=±10 M=± 2.5 C=±15 N=±150 D=±20 P=±35 E=±30 Q=±60 F=±50 R=±80 G=±100 S= see serial H=±25 I=±200 J=±45 K=±40	Load Capacitance 32= 32pF 10=10pF 08=8pF CS=Series	F=Fund 3=3 rd Overtone 5=5 th Overtone 7=7 th Overtone		1= -20°C To 60°C 2= 0°C To 70°C 3= -20°C To 70°C 4= -10°C To 70°C 5= -10°C To 60°C 6= 0°C To 50°C 7= -25°C To 70°C 8= 0°C To 80°C 9= -20°C To 85°C	A= -40°C To 85°C B= -20°C To 50°C C= -40°C To 90°C D= 0°C To 40°C E= 0°C To 60°C F= -30°C To 70°C G= -55°C To 85°C H= -55°C To 105°C J= 40°C To 40°C K= -40°C To 105°C L= -40°C To 125°C M= -55°C To 125°C S= see serial no. for detail																				
<p>Frequency</p> <p>First digit shows frequency range</p> <table border="1"> <thead> <tr> <th>1st digit</th> <th>Range</th> <th>Format</th> <th>Example</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>1MHz to 9.999999MHz</td> <td>Lxxxxxx</td> <td>1.288000MHz = L1 288000</td> </tr> <tr> <td>M</td> <td>10MHz to 99.99999MHz</td> <td>Mxx xxxxx</td> <td>14.31818MHz = M14 31818</td> </tr> <tr> <td>Numeric</td> <td>100MHz to 999.99999MHz</td> <td>xxxx. xxxx</td> <td>100.00000MHz = 100 00000</td> </tr> <tr> <td></td> <td></td> <td></td> <td>450.12300MHz = 450 12300</td> </tr> </tbody> </table>							1 st digit	Range	Format	Example	L	1MHz to 9.999999MHz	Lxxxxxx	1.288000MHz = L1 288000	M	10MHz to 99.99999MHz	Mxx xxxxx	14.31818MHz = M14 31818	Numeric	100MHz to 999.99999MHz	xxxx. xxxx	100.00000MHz = 100 00000				450.12300MHz = 450 12300
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* Marking Information refer to page 38



ITEM	UMI	CRYSTAL DIMENSION
A		7.7±0.15
B		3.75±0.2
C		6.9±0.1
D		LEAD LENGTH 5.0-13.0MM REFER TO CUSTOMER REQUEST
E		8.0 MAX.
F		3.2±0.2
G		2.2±0.1
H		Ø0.35±0.05



ITEM	UM5	CRYSTAL DIMENSION
A		7.7±0.15
B		3.75±0.2
C		6.9±0.1
D		12.8±0.2
E		6.0 MAX.
F		3.2±0.2
G		2.2±0.1
H		Ø0.35±0.05