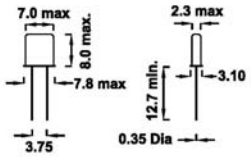
QUARTZ CRYSTAL –UM-1, UM-1 SLIM, UM-1 COLD WELD, UM-1 3 LEAD

❑ FEATURE

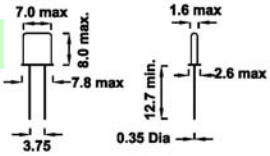
- All metal welded package
- Wide frequency range from 7.5 MHz upto 170 MHz
- RoHS Compliant Standard

Outline

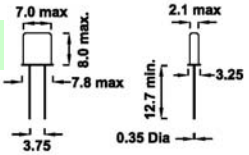
UM-1
RESISTANCE WELD



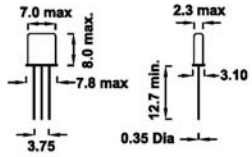
UM-1SLIM
RESISTANCE WELD



UM-1
COLD WELD



UM-1
RESISTANCE WELD
3 LEAD



▲ All dimensions are in mm.

Frequency Range	7.5 MHz to 170 MHz
Frequency Adjustment Tolerance at 25° C	Select from table below
Operating Temperature Range	Select from table below
Frequency Stability	Select from table below
ESR	Select from table below
Drive level	100 μ Watts Typical (or specify)
Shunt Capacitance C0	7.0 pF max.
Resonance Condition	XXS – series, XXP – Parallel with xx pF (for parallel please specify the xx value in pF)
Ageing	Resistance Weld: ±3 PPM / Year Cold Weld: ±1 PPM / Year

Operating Temperature Range	
Code	Range
A	0 to +50 °C
B	0 to +60 °C
F	0 to +70 °C
D	-10 to +60 °C
E	-10 to +70 °C
C	-20 to +70 °C
G	-30 to +80 °C
H	-30 to +85 °C
I	-40 to +85 °C
J	-40 to +90 °C
K	-55 to +105 °C
L	-55 to +125 °C

Frequency Adjustment Tolerance at 25°C/Stability Over OTR	
Code	Stability
R	±3 PPM
B	±5 PPM
C	±7.5 PPM
D	±10 PPM
E	±15 PPM
F	±20 PPM
G	±25 PPM
H	±30 PPM
M	±50 PPM
K	±100 PPM

Frequency Range By Mode Of Oscillation		
Fundamental	3rd Overtone	5th Overtone
7.5 to 41.0 MHz	20 to 85 MHz	60 to 170 MHz

Max Equivalent Series Resistance Table

Frequency Range MHz	ESR
Fundamental	
7.5 to ≤10.0	50 Ω
10.0 to ≤13.0	40 Ω
13.0 to ≤18.0	25 Ω
18.0 to ≤25.0	20 Ω
25.0 to ≤41.0	15 Ω

Frequency Range MHz	ESR
3rd Overtone	
20.0 to ≤30.0	45 Ω
30.0 to ≤85.0	30 Ω
5th Overtone	
60.0 to ≤100.0	70 Ω
100.0 to ≤140.0	80 Ω
140.0 to ≤170.0	100 Ω

Ordering Information

Example

UM1 2 F C D 1 20 P 010M000000

- Package
- Pin Profile
- Frequency adjustment Tolerance at 25°C
- OTR: -20 to 70°C
- Stability over OTR: ± 10 PPM
- Mode: 1: Fundamental 3: 3rd Overtone 5: 5th Overtone
- Resonance Condition XXS: Series 20 P: Parallel with 20pF
- Frequency 10MHz

Pin Profile	Code
2 Pin Straight	2
3 Pin Straight	3

Specifications subject to change without notice
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