



Quartz Crystal

HC-50U

Features

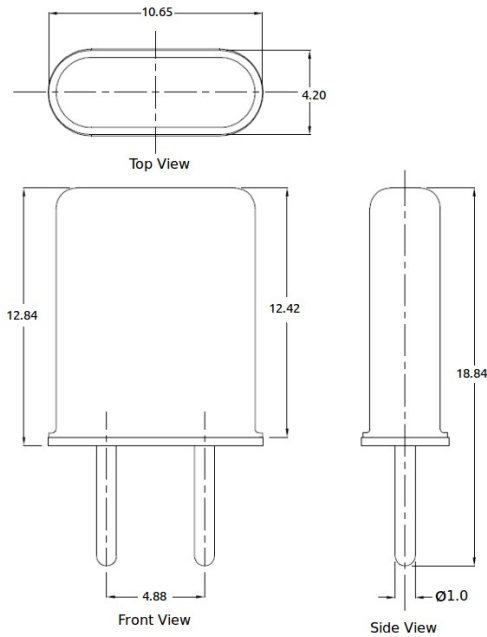
- All metal welded package
- 1.8432 MHz ~ 125 MHz
- RoHS Compliant

Table 1: General Specifications

Frequency Range	1.8432 MHz ~ 125 MHz
Frequency Tolerance @ 25°C	Select from Table 4
Operating Temperature Range (OTR)	Select from Table 4
Temperature Stability	Select from Table 4
Equivalent Series Resistance (ESR)	As per Table 3
Drive Level	100 μ Watts (typical)
Shunt Capacitance, C ₀	7.0 pF (max.)
Resonance Condition	XXS – Series, XXP – Parallel with xx pF (for parallel, please specify the xx value in pF)
Aging @ 25°C	±3 ppm (max.)/ Year

Mechanical Specifications

Outline



▲ All dimensions are in mm. Tolerance is ± 0.3 mm, unless otherwise specified.

Table 2: Frequency Range By Mode of Oscillation

Fundamental	3rd Overtone	5th Overtone
1.8432 to 36.864 MHz	20 to 85 MHz	60 to 125 MHz

Table 3: Max. ESR

Frequency Range (MHz)	ESR	Frequency Range (MHz)	ESR
Fundamental		3rd Overtone	
1.8432 to ≤2.3	800 Ω	20.0 to ≤30.0	35 Ω
2.3 to ≤2.8	450 Ω	30.0 to ≤85.0	30 Ω
2.8 to ≤3.0	250 Ω	5th Overtone	
3.0 to ≤3.5	150 Ω	60.0 to ≤100.0	70 Ω
3.5 to ≤4.5	100 Ω	100.0 to ≤125.0	80 Ω
4.5 to ≤5.0	80 Ω		
5.0 to ≤7.0	60 Ω		
7.0 to ≤9.0	45 Ω		
9.0 to ≤12.0	30 Ω		
12.0 to ≤17.0	25 Ω		
17.0 to ≤36.864	20 Ω		

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Table 4: Operating Temperature Range and Frequency Tolerance/ Temperature Stability

OTR Codes	Stability Codes		B	D	E	F	G	M	K
	Temperature Stability		± 5 ppm	± 10 ppm	± 15 ppm	± 20 ppm	± 25 ppm	± 50 ppm	± 100 ppm
A	Operating Temperature Range	0°C to +50°C							
B		0°C to +60°C							
F		0°C to +70°C							
D		-10°C to +60°C							
E		-10°C to +70°C							
C		-20°C to +70°C							
G		-30°C to +80°C							
H		-30°C to +85°C							
I		-40°C to +85°C							
J		-40°C to +90°C							
K		-55°C to +105°C							
L		-55°C to +125°C							



Denotes Available

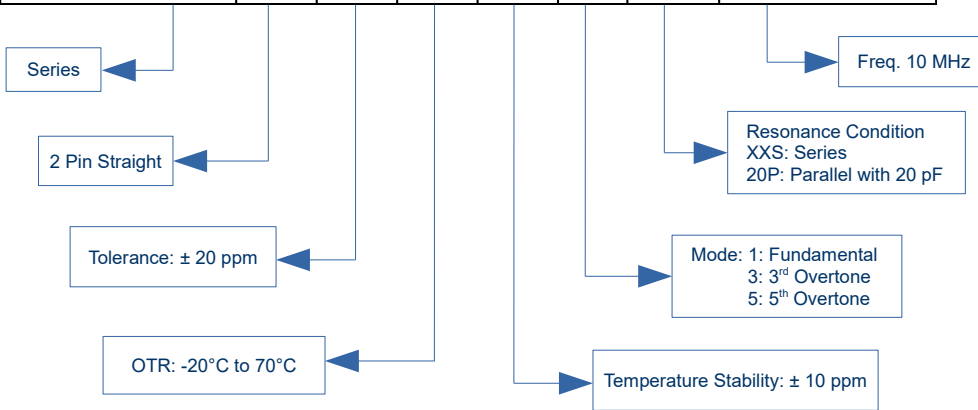


Denotes not Available

Ordering Information

Example

50U	2	F	C	D	1	20P	010M000000
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Specifications subject to change without notice

Rev. Date: 1st July 2021

Note: Not all combination of options are available. Other specifications may be available upon request.

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Andhra Electronics Pvt. Ltd.

34 & 35, IDA,
Kakinada-533 005
Andhra Pradesh, India
URL: www.andhraelec.com

Phone: +91 884 234 2203
Fax: +91 884 234 1145
e-mail: info@andhraelec.com