

CR125/U-Series Specifications



0.757L x 0.352W x 0.775H (in)

PDI MIL-PRF-3098 Qualified Product List (QPL) crystals are available in both standard or custom frequencies to provide precision timing in a resistance welded HC-48 package.

ex) **CR—125—/U—3M000000**

COMPONENT
Crystal Unit

NUMBER
Type of Crystal

BASIC INDICATOR
General Utility

XXXXXXXX
Specified Nominal Frequency

Parameter		Frequency Range	Units
		2.250000 to 3.050000	MHz
Mode of Oscillation		Fundamental	
Equivalent Series Resistance		See Table 1	
Operating Temperature Range	noncontrolled	-55 to +105	°C
Frequency Tolerance (Inclusive)	Operating Temperature Range	±0.005	%
Drive Level	Max	1.0	mW
Load Capacitance (CL)	±0.05	32.0	pF
Seal Method	Resistance Weld		
Shunt Capacitance (C0)	Max	7.0	pF

Environmental Specifications			Units
Shock	Frequency Change Permitted	±0.0005	%
	Equivalent Resistance Change Permitted	±15% or ±2Ω, whichever is greater	
Vibration MIL-STD-202, Method 204, Condition B (Amplitude to produce 5 gravity units, max)	Frequency Change Permitted	±0.0005	%
	Equivalent Resistance Change Permitted	±15% or ±2Ω, whichever is greater	
Temperature Cycling		±0.001	%
Aging (Aging Temperature: 105°C for 200 days)	Frequency Change Permitted	±0.002	%

(Table 1) Equivalent Series Resistance

Frequency Range (Inclusive)	Max Resistance	Units
2.25 MHz – 2.999999 MHz	320	Ω
3.00 MHz – 3.050000 MHz	175	

The product described in this spec. consist of this specification and MIL-PRF-3098.

Decimal XXX = ± .008, XX = ± .020 Metric [XXX = ± .20], [XX = ± .50]

MIL-PRF-3098 w/Amendment 1

Table VI, Group B Inspection for Product Level B Crystals

Subgroup I 1/	Requirement Paragraph	Method Paragraph
Solderability	3.7	4.10.3
Resistance to solvents (4 sample units)	3.8	4.10.4
Shock (Specified pulse)	3.17	4.10.13
Vibration	3.19.1	4.10.15.1
Thermal shock	3.23	4.10.19.1
Seal	3.24	4.10.26
Salt atmosphere (Corrosion)	3.27	4.10.21
Moisture resistance	3.28	4.10.22
Terminal strength 2/	3.30	4.10.23
Visual and mechanical examination (Internal) 2/	3.5, 3.6, 3.35	4.10.2.2
Bond strength (When specified) 2/	3.31	4.10.24
Subgroup II 3/		
Insulation resistance	3.14	4.10.10
Aging	3.29	4.10.27.1

1/ If the contractor can demonstrate that any of these tests have been performed for three consecutive periods with zero failures, the frequency of this test, with the approval of the qualifying activity, can be performed every 36 months. If the design, material, construction, or processing of the crystal units change, or if there are any quality problems or failures, the qualifying activity may require resumption of the original test frequency.

2/ Only two units are required. These two samples units shall be subjected to terminal strength, visual and mechanical (Internal), and bond strength (When specified see 3.1).

3/ If the contractor can demonstrate that any of these tests have been performed for six consecutive periods with zero failures, the frequency of this test, with the approval of the qualifying activity, can be performed every 36 months. If the design, material, construction, or processing of the crystal units change, or if there are any quality problems or failures, the qualifying activity may require resumption of the original test frequency.

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PACKAGE DIMENSIONS

