

CR117/U-Series Specifications



0.435L x 0.183W x 0.530H (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-50 package.

ex) **CR-117-/U-40M00000**

COMPONENT
Crystal Unit

NUMBER
Type of Crystal

BASIC INDICATOR
General Utility

XXXXXXXX
Specified Nominal
Frequency

Parameter		Frequency Range	Units
		30.000000 to 61.000000	MHz
Mode of Oscillation		3rd Overtone	
Equivalent Series Resistance	Max	40	Ω
Reference Temperature		+25	°C
Operating Temperature Range	noncontrolled	-40 to +65	°C
Operable Temperature Range		+65 to +80	°C
Frequency Tolerance (Inclusive)	Operating Temperature Range (of frequency measured @ 25°C)	±0.0015	%
	Reference Temperature	±0.001	
Drive Level	Max	1.0	mW
Load Capacitance (CL)		Series	
Seal Method	Resistance Weld		
Shunt Capacitance (C0)	Max	7.0	pF
Calibration Values	Resistance	40	Ω
	Crystal Current	0.28	mA

Environmental Specifications			Units
Shock MIL-STD-202, Method 202	Frequency Change Permitted	±0.0005	%
	Equivalent Resistance Change Permitted	±10	%
Vibration MIL-STD-202, Method 204, Condition A .03 inch (0.76 mm) (.06 inch (15.24 mm) total excursion) 10 cps to 55 cps; amplitude to produce 5 gravity units, 55 cps to 500 cps.	Frequency Change Permitted	±0.0005	%
	Equivalent Resistance Change Permitted	±10	%
Frequency and Equivalent Resistance	MIL-PRF-3098 , Method A		
Aging	Frequency Change Permitted	±0.0005	%

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.

PACKAGE DIMENSIONS

