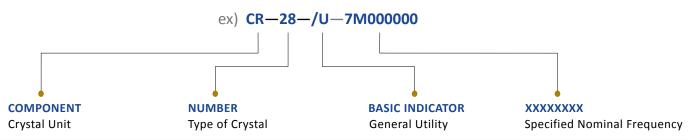
CR28/U-Series Specifications





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.



Parameter		Frequency Range	Units MHz	
		2.250000 to 20.000000		
Mode of Oscillation		Fundamental		
Equivalent Series Resistance		See Table 1		
Reference Temperature	±1	+75	°C	
Operating Temperature Range	Controlled	+70 to +80	°C	
Operable Temperature Range		-55 to +70 and +80 to +90	°C	
Frequency Tolerance (Inclusive)	Room Temperature	±70	ppm	
	Operating Temperature Range	±20		
Frequency Stability		±5	ppm	
Drive Level	Max	1.0	mW	
Load Capacitance (CL)		Series		
Seal Method	Resistance Weld			
Shunt Capacitance (CO)	Max	7.0	pF	

Environmental Specifications			Units
Shock (Specified Pulse)	Frequency Change Permitted	±5	ppm
	Equivalent Resistance Change Permitted	±10	%
Vibration MIL-STD-202, Method 201	Frequency Change Permitted	±5	ppm
	Equivalent Resistance Change Permitted	±10	%
Thermal Shock	Frequency Change Permitted	±5	ppm
	Equivalent Resistance Change Permitted	±10	%
Aging	Frequency Change Permitted	±5	ppm

(Table 1) Equivalent Series Resistance			
Frequency Range (Inclusive)	Max Resistance	Units	
2.25 MHz	150		
>2.25 MHz – 2.60 MHz	120		
>2.60 MHz – 3.00 MHz	90		
>3.00 MHz – 3.40 MHz	70		
>3.40 MHz – 3.75 MHz	52		
>3.75 MHz – 4.00 MHz	45	Ω	
>4.00 MHz – 5.00 MHz	37		
>5.00 MHz – 7.00 MHz	25		
>7.00 MHz – 10.00 MHz	20		
>10.00 MHz – 15.00 MHz	18		
>15.00 MHz – 20.00 MHz	15		

The product described in this spec. consist of this specification and $\mbox{\it MIL-PRF-3098}.$

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

REV: NA	SIZE: A	CAGE: A	1 of 3

CR28/U-Series Inspection



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

