

QUALIFIED PRODUCTS LIST
OF
PRODUCTS QUALIFIED UNDER MILITARY SPECIFICATION
MIL-C-3098
CRYSTAL UNITS, QUARTZ
GENERAL SPECIFICATION FOR

This list has been prepared for use by or for the Government in the acquisition of products covered by Specification MIL-C-3098. Listing of a product is not intended to and does not connote indorsement of the product by the Department of Defense. All products listed herein have been qualified under the requirements for the product as specified in the latest effective issue of the applicable specification. This list is subject to change without notice; revision or amendment of this list will be issued as necessary. The listing of a product does not release the supplier from compliance with the specification requirements.



THE ACTIVITY RESPONSIBLE FOR THIS QPL IS THE U.S. ARMY RESEARCH LABORATORY. The activity designated as agent for all contacts relative to this QPL is the Defense Electronics Supply Center (DESC-ELS), Dayton, OH 45444-5764.

NOTE: * PLUS (+) FREQUENCY TO BE ADDED TO ALL M3098 PART NUMBERS.

GOVERNMENT DESIGNATION	MANUFACTURER'S DESIGNATION OR TYPE NUMBER	TEST OR QUALIFICATION REFERENCE	SPECIFI- CATION SHEET	MANUFACTURER'S NAME (ADDRESS ON LAST PAGE)
*CR5/U 2M000000 thru 10M00000	CR5/U + Frequency	3098-35-71	/77	Bliley Electric Co.
*CR5/U 2M000000 thru 10M00000	CR5/U + Frequency	QA-118/ALD3 11 Dec 1967	/77	Croven, Ltd.
*CR5/U 2M000000 thru 10M00000	CR5/U + Frequency	3098-654-67	/77	M-tron Industries, Inc.
*CR5/U 2M000000 thru 10M00000	CR5/U + Frequency	3098-607-74	/77	McCoy Electronics Co. (1, 2)
*CR5/U 2M000000 thru 10M00000	CR5/U + Frequency	3098-481-82	/77	Valpey-Fisher Corp.
*CR6/U 2M000000 thru 10M00000	CR6/U + Frequency	3098-35-71	/78	Bliley Electric Co.
*CR6/U 2M000000 thru 10M00000	CR6/U + Frequency	QA-118-ALD3 11 Dec 1967	/78	Croven, Ltd.
*CR6/U 2M000000 thru 10M00000	CR6/U + Frequency	3098-654-67	/78	M-tron Industries, Inc.
*CR6/U 2M000000 thru 10M00000	CR6/U + Frequency	3098-607-74	/78	McCoy Electronics Co. (1, 2)
*CR6/U 2M000000 thru 10M00000	CR6/U + Frequency	3098-481-82	/78	Valpey-Fisher Corp.

GOVERNMENT DESIGNATION	MANUFACTURER'S DESIGNATION OR TYPE NUMBER	TEST OR QUALIFICATION REFERENCE	SPECIFI- CATION SHEET	MANUFACTURER'S NAME (ADDRESS ON LAST PAGE)
*CR8/U 1M000000 thru 10M00000	CR8/U + Frequency	3098-35-71	/111	Bliley Electric Co.
*CR8/U 1M000000 thru 10M00000	CR8/U + Frequency	QA-118/ALD3 11 Dec 1967	/111	Croven, Ltd.
*CR8/U 1M000000 thru 10M00000	CR8/U + Frequency	3098-654-67	/111	M-tron Industries, Inc.
*CR8/U 1M000000 thru 10M00000	CR8/U + Frequency	3098-607-74	/111	McCoy Electronics Co. (1, 2)
*CR8/U 1M000000 thru 10M00000	CR8/U + Frequency	3098-481-82	/111	Valpey-Fisher Corp.
*CR18/U 920K0000 thru 20M00000	CR18/U + Frequency	3098-35-71	/3	Bliley Electric Co.
*CR18/U 1M000000 thru 20M00000	CR18/U + Frequency	QA-118/ALD3 11 Dec 1967	/3	Croven, Ltd.
*CR18/U 1M000000 thru 20M00000	CR18/U + Frequency	3098-654-67	/3	M-tron Industries, Inc.
*CR18/U 1M000000 thru 20M00000	CR18/U + Frequency	3098-821-80	/3	McCoy Electronics Co. (1, 2)
*CR18/U 900K0000 thru 20M00000	CR18/U + Frequency	3098-692-79	/3	U. S. Crystal Corp.
*CR18/U 800K0000 thru 20M00000	CR18/U + Frequency	3098-481-82	/3	Valpey-Fisher Corp.
*CR19/U 920K0000 thru 20M00000	CR19/U + Frequency	3098-35-71	/4	Bliley Electric Co.
*CR19/U 1M000000 thru 20M00000	CR19/U + Frequency	QA-118/ALD3 11 Dec 1967	/4	Croven, Ltd.
*CR19/U 1M000000 thru 20M00000	CR19/U + Frequency	3098-654-67	/4	M-tron Industries, Inc.
*CR19/U 1M000000 thru 20M00000	CR19/U + Frequency	3098-607-74	/4	McCoy Electronics Co. (1, 2)
*CR19/U 800K0000 thru 20M00000	CR19/U + Frequency	3098-692-79	/4	U. S. Crystal Corp.
*CR19/U 800K0000 thru 20M00000	CR19/U + Frequency	3098-481-82	/4	Valpey-Fisher Corp.
*CR25B/U 200K0000 thru 555K0000	CR25B/U + Frequency	3098-34-71	/7	Bliley Electric Co.
*CR26/U 200K0000 thru 500K0000	CR26/U + Frequency	3098-32-71	/8	Bliley Electric Co.
*CR27/U 920K0000 thru 20M00000	CR27/U + Frequency	3098-33-71	/9	Bliley Electric Co.
*CR27/U 1M000000 thru 20M00000	CR27/U + Frequency	3098-655-67	/9	M-tron Industries, Inc.
*CR27/U 1M000000 thru 20M00000	CR27/U + Frequency	3098-1095-64	/9	McCoy Electronics Co. (1, 2)

GOVERNMENT DESIGNATION	MANUFACTURER'S DESIGNATION OR TYPE NUMBER	TEST OR QUALIFICATION REFERENCE	SPECIFI- CATION SHEET	MANUFACTURER'S NAME (ADDRESS ON LAST PAGE)
*CR27/U 800K0000 thru 20M00000	CR27/U + Frequency	3098-692-79	/9	U. S. Crystal Corp.
*CR27/U 800K0000 thru 20M00000	CR27/U + Frequency	3098-481-82	/9	Valpey-Fisher Corp.
*CR28/U 920K0000 thru 20M00000	CR28/U + Frequency	3098-33-71	/10	Bliley Electric Co.
*CR28/U 1M000000 thru 20M00000	CR28/U + Frequency	3098-655-67	/10	M-tron Industries, Inc.
*CR28/U 1M000000 thru 20M00000	CR28/U + Frequency	3098-1095-64	/10	McCoy Electronics Co. (1, 2)
*CR28/U 800K0000 thru 20M00000	CR28/U + Frequency	3098-692-79	/10	U. S. Crystal Corp.
*CR28/U 800K0000 thru 20M00000	CR28/U + Frequency	3098-481-82	/10	Valpey-Fisher Corp.
*CR33/U 10M00000 thru 30M00000	CR33/U + Frequency	3098-512-78	/14	Bliley Electric Co.
*CR35/U 920K0000 thru 20M00000	CR35/U + Frequency	3098-33-71	/15	Bliley Electric Co.
*CR35/U 1M000000 thru 20M00000	CR35/U + Frequency	3098-655-67	/15	M-tron Industries, Inc.
*CR35/U 1M000000 thru 20M00000	CR35/U + Frequency	3098-1095-64	/15	McCoy Electronics Co. (1, 2)
*CR35/U 800K0000 thru 20M00000	CR35/U + Frequency	3098-481-82	/15	Valpey-Fisher Corp.
*CR36/U 920K0000 thru 20M00000	CR36/U + Frequency	3098-33-71	/16	Bliley Electric Co.
*CR36/U 1M000000 thru 20M00000	CR36/U + Frequency	3098-655-67	/16	M-tron Industries, Inc.
*CR36/U 1M000000 thru 20M00000	CR36/U + Frequency	3098-1095-64	/16	McCoy Electronics Co. (1, 2)
*CR36/U 800K0000 thru 20M00000	CR36/U + Frequency	3098-481-82	/16	Valpey-Fisher Corp.
*CR37/U 90K00000 thru 250K0000	CR37/U + Frequency	3098-29-71	/17	Bliley Electric Co.
*CR42/U 90K00000 thru 250K0000	CR42/U + Frequency	3098-30-71	/21	Bliley Electric Co.
*CR45/U 455K0000	CR45/U + Frequency	3098-31-71	/24	Bliley Electric Co.
*CR46B/U 200K0000 thru 550K0000	CR46B/U + Frequency	3098-34-71	/25	Bliley Electric Co.
*CR47/U 190K0000 thru 500K0000	CR47/U + Frequency	3098-32-71	/26	Bliley Electric Co.

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*CR52/U 15M00000 thru 61M00000	CR52/U + Frequency	QA-152/D3 22 Apr 1968	/30	Croven, Ltd.
*CR52/U 10M00000 thru 61M00000	CR52/U + Frequency	3098-833-67	/30	M-tron Industries, Inc.
*CR52/U 10M00000 thru 61M00000	CR52/U + Frequency	3098-1148-65	/30	McCoy Electronics Co. (1, 2)
*CR52/U 10M00000 thru 61M00000	CR52/U + Frequency	*CR148/U	/30	U. S. Crystal Corp.
*CR54/U 50M00000 thru 125M0000	CR54/U + Frequency	3098-995-78	/32	U. S. Crystal Corp.
*CR54/U 50M00000 thru 125M0000	CR54/U + Frequency	3098-479-82	/32	Valpey-Fisher Corp.
*CR55/U 24M00000 thru 62M00000	CR55/U + Frequency	QA-277/LD3 4 Jan 1968	/33	Croven, Ltd.
*CR55/U 18M00000 thru 61M00000	CR55/U + Frequency	3098-815-67 3098-154-84	/33	Electro Dynamics Crystal Corp.
*CR55/U 17M00000 thru 61M00000	CR55/U + Frequency	3098-280-73	/33	M-tron Industries, Inc.
*CR55/U 17M00000 thru 62M00000	CR55/U + Frequency	3098-1091-64	/33	McCoy Electronics Co. (1, 2)
*CR55/U 17M00000 thru 62M00000	CR55/U + Frequency	3098-698-79	/33	U. S. Crystal Corp.
*CR55/U 17M00000 thru 62M00000	CR55/U + Frequency	3098-484-82	/33	Valpey-Fisher Corp.
*CR56/U 50M00000 thru 125M0000	CR56/U + Frequency	QA-180/D3 28 Jan 1969	/34	Croven, Ltd.
*CR56/U 50M00000 thru 125M0000	CR56/U + Frequency	3098-520-68	/34	Electro Dynamics Crystal Corp.
*CR56/U 50M00000 thru 125M0000	CR56/U + Frequency	3098-1092-64	/34	McCoy Electronics Co. (1, 2)
*CR56/U 50M00000 thru 125M0000	CR56/U + Frequency	3098-997-78	/34	U. S. Crystal Corp.
*CR56/U 50M00000 thru 125M0000	CR56/U + Frequency	3098-482-82	/34	Valpey-Fisher Corp.
*CR58/U 920K0000 thru 20M00000	CR58/U + Frequency	3098-35-71	/36	Bliley Electric Co.
*CR58/U 1M000000 thru 20M00000	CR58/U + Frequency	QA-118/ALD3 11 Dec 1967	/36	Croven, Ltd.
*CR58/U 1M000000 thru 20M00000	CR58/U + Frequency	3098-654-67	/36	M-tron Industries, Inc.
*CR58/U 1M000000 thru 20M00000	CR58/U + Frequency	3098-1095-64	/36	McCoy Electronics Co. (1, 2)
*CR58/U 800K0000 thru 20M00000	CR58/U + Frequency	3098-481-82	/36	Valpey-Fisher Corp.

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*CR59/U 50M00000 thru 125M0000	CR59/U + Frequency	QA-559/LD3 8 Jul 1968	/37	Croven, Ltd.
*CR59/U 50M00000 thru 125M0000	CR59/U + Frequency	3098-520A-68	/37	Electro Dynamics Crystal Corp.
*CR59/U 50M00000 thru 125M0000	CR59/U + Frequency	3098-997-78	/37	U. S. Crystal Corp.
*CR59/U 50M00000 thru 125M0000	CR59/U + Frequency	3098-482-82	/37	Valpey-Fisher Corp.
*CR60/U 5M000000 thru 20M00000	CR60/U + Frequency	3098-281-79	/38	Bliley Electric Co.
*CR60/U 5M000000 thru 20M00000	CR60/U + Frequency	QA-690/E2 2 Dec 1971	/38	Croven, Ltd.
*CR60/U 5M000000 thru 20M00000	CR60/U + Frequency	3098-106-66	/38	CTS Knights, Inc.
*CR60/U 5M000000 thru 20M00000	CR60/U + Frequency	3098-450-76	/38	Electro Dynamics Crystals Corp.
*CR60/U 5M000000 thru 20M00000	CR60/U + Frequency	3098-261-68	/38	M-tron Industries, Inc.
*CR60/U 5M000000 thru 20M00000	CR60/U + Frequency	3098-494-66	/38	McCoy Electronics Co. (1, 2)
*CR60/U 5M000000 thru 20M00000	CR60/U + Frequency	3098-996-78	/38	U. S. Crystal Corp.
*CR60/U 5M000000 thru 20M00000	CR60/U + Frequency	3098-480-82	/38	Valpey-Fisher Corp.
*CR61/U 24M00000 thru 61M00000	CR61/U + Frequency	QA-277/LD3 4 Jan 1968	/39	Croven, Ltd.
*CR61/U 18M00000 thru 61M00000	CR61/U + Frequency	3098-814-67 3098-154-84	/39	Electro Dynamics Crystal Corp.
*CR61/U 17M00000 thru 61M00000	CR61/U + Frequency	3098-484-82	/39	Valpey-Fisher Corp.
*CR62/U 920K0000 thru 20M00000	CR62/U + Frequency	3098-33-71	/40	Bliley Electric Co.
*CR62/U 1M000000 thru 20M00000	CR62/U + Frequency	3098-655-67	/40	M-tron Industries, Inc.
*CR62/U 1M000000 thru 20M00000	CR62/U + Frequency	3098-1095-64	/40	McCoy Electronics Co. (1, 2)
*CR62/U 800K0000 thru 20M00000	CR62/U + Frequency	3098-481-82	/40	Valpey-Fisher Corp.
*CR63B/U 200K0000 thru 555K0000	CR63B/U	3098-34-71	/41	Bliley Electric Co.
*CR64/U 3M700000 thru 20M00000	CR64/U + Frequency	QA-690/E2 2 Dec 1971	/42	Croven, Ltd.
*CR64/U 2M900000 thru 20M00000	CR64/U + Frequency	3098-106-66 3098-1136-83	/42	CTS Knights, Inc.
*CR64/U 2M400000 thru 20M00000	CR64/U + Frequency	3098-450-76	/42	Electro Dynamics Crystal Corp.

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*CR64/U 2M400000 thru 20M00000	CR64/U + Frequency	3098-261-68	/42	M-tron Industries, Inc.
*CR64/U 2M400000 thru 20M00000	CR64/U + Frequency	3098-657-86	/42	McCoy Electronics Co. (1, 2)
*CR64/U 2M900000 thru 20M00000	CR64/U + Frequency	3098-996-78	/42	U. S. Crystal Corp.
*CR64/U 2M900000 thru 20M00000	CR64/U + Frequency	3098-480-82	/42	Valpey-Fisher Corp.
*CR65/U 15M00000 thru 61M00000	CR65/U + Frequency	QA-165/L3 5 Jan 1970	/43	Croven, Ltd.
*CR65/U 10M00000 thru 61M00000	CR65/U + Frequency	3098-833-67	/43	M-tron Industries, Inc.
*CR65/U 10M00000 thru 61M00000	CR65/U + Frequency	3098-1148-65	/43	McCoy Electronics Co. (1, 2)
*CR65/U 10M00000 thru 61M00000	CR65/U + Frequency	*CR148/U	/43	U. S. Crystal Corp.
*CR67/U 24M00000 thru 62M00000	CR67/U + Frequency	QA-277/LD3 4 Jan 1968	/45	Croven, Ltd.
*CR67/U 18M00000 thru 62M00000	CR67/U + Frequency	3098-815-67 3098-154-84	/45	Electro Dynamics Crystal Corp.
*CR67/U 17M00000 thru 61M00000	CR67/U + Frequency	3098-280-73	/45	M-tron Industries, Inc.
*CR67/U 17M00000 thru 62M00000	CR67/U + Frequency	3098-1091-64	/45	McCoy Electronics Co. (1, 2)
*CR67/U 17M00000 thru 62M00000	CR67/U + Frequency	3098-693-79	/45	U. S. Crystal Corp.
*CR67/U 17M00000 thru 62M00000	CR67/U + Frequency	3098-484-82	/45	Valpey-Fisher Corp.
*CR69/U 3M700000 thru 25M00000	CR69/U + Frequency	QA-690/E2 2 Dec 1971	/47	Croven, Ltd.
*CR69/U 2M900000 thru 25M00000	CR69/U + Frequency	3098-450-76	/47	Electro Dynamics Crystal Corp.
*CR69/U 2M900000 thru 25M00000	CR69/U + Frequency	3098-494-66	/47	McCoy Electronic Co. (1, 2)
*CR69/U 2M900000 thru 25M00000	CR69/U + Frequency	3098-996-78	/47	U. S. Crystal Corp.
*CR69/U 2M900000 thru 25M00000	CR69/U + Frequency	3098-480-82	/47	Valpey-Fisher Corp.
*CR71/U 4M999995 thru 5M500000	BG61AH-5 + Frequency	3098-235-69	/49	Bliley Electric Co.
*CR72/U 24M00000 thru 61M00000	CR72/U + Frequency	QA-277/LD3 4 Jan 1968	/50	Croven, Ltd.
*CR72/U 18M00000 thru 61M00000	CR72/U + Frequency	3098-815-67 3098-154-84	/50	Electro Dynamics Crystal Corp.

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*CR72/U 17M00000 thru 61M00000	CR72/U + Frequency	3098-280-73	/50	M-tron Industries, Inc.
*CR72/U 17M00000 thru 61M00000	CR72/U + Frequency	3098-1091-64	/50	McCoy Electronics Co. (1, 2)
*CR72/U 17M00000 thru 61M00000	CR72/U + Frequency	3098-484-82	/50	Valpey-Fisher Corp.
*CR73/U 17M00000 thru 61M00000	CR73/U + Frequency	3098-1669-64	/54	McCoy Electronics Co. (1, 2)
*CR74/U 45M00000 thru 125M0000	CR74/U + Frequency	3098-1129-86	/51	McCoy Electronics Co. (1, 2)
*CR75/U 50M00000 thru 125M0000	CR75/U + Frequency	3098-995-78	/52	U. S. Crystal Corp.
*CR75/U 50M00000 thru 125M0000	CR75/U + Frequency	3098-479-92	/52	Valpey-Fisher Corp.
*CR76/U 24M00000 thru 61M00000	CR76/U + Frequency	QA-277/LD3 4 Jan 1968	/53	Croven, Ltd.
*CR76/U 18M00000 thru 61M00000	CR76/U + Frequency	3098-154-84	/53	Electro Dynamics Crystal Corp.
*CR76/U 16M00000 thru 61M00000	CR76/U + Frequency	3098-280-73	/53	M-tron Industries, Inc.
*CR76/U 16M00000 thru 61M00000	CR76/U + Frequency	3098-1105-86	/53	McCoy Electronics Co. (1, 2)
*CR76/U 16M00000 thru 61M00000	CR76/U + Frequency	3098-693-79	/53	U. S. Crystal Corp.
*CR76/U 16M00000 thru 61M00000	CR76/U + Frequency	3098-484-82	/53	Valpey-Fisher Corp.
*CR77/U 24M00000 thru 62M00000	CR77/U + Frequency	QA-277/LD3 4 Jan 1968	/55	Croven, Ltd.
*CR77/U 18M00000 thru 62M00000	CR77/U + Frequency	3098-815-67 3098-154-84	/55	Electro Dynamics Crystal Corp.
*CR77/U 17M00000 thru 61M00000	CR77/U + Frequency	3098-280-73	/55	M-tron Industries, Inc.
*CR77/U 17M00000 thru 62M00000	CR77/U + Frequency	3098-1091-64	/55	McCoy Electronics Co. (1, 2)
*CR77/U 17M00000 thru 62M00000	CR77/U + Frequency	3098-693-79	/55	U. S. Crystal Corp.
*CR77/U 17M00000 thru 62M00000	CR77/U + Frequency	3098-484-82	/55	Valpey-Fisher Corp.
*CR78/U 3M700000 thru 20M00000	CR78/U + Frequency	QA-690/E2 2 Dec 1971	/62	Croven, Ltd.
*CR78/U 4M200000 thru 20M00000	CR78/U + Frequency	3098-106-66	/62	CTS Knights, Inc.
*CR78/U 2M200000 thru 20M00000	CR78/U + Frequency	3098-450-76	/62	Electro Dynamics Crystal Corp.

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*CR78/U 2M200000 thru 20M00000	CR78/U + Frequency	3098-261-68	/62	M-tron Industries, Inc.
*CR78/U 2M200000 thru 20M00000	CR78/U + Frequency	3098-494-66	/62	McCoy Electronics Co. (1, 2)
*CR78/U 2M900000 thru 20M00000	CR78/U + Frequency	3098-996-78	/62	U. S. Crystal Corp.
*CR78/U 2M200000 thru 20M00000	CR78/U + Frequency	3098-480-82	/62	Valpey-Fisher Corp.
*CR79/U 3M700000 thru 20M00000	CR79/U + Frequency	QA-690/E2 2 Dec 1971	/63	Croven, Ltd.
*CR79/U 2M900000 thru 20M00000	CR79/U + Frequency	3098-106-66 3098-1136-83	/63	CTS Knights, Inc.
*CR79/U 2M900000 thru 20M00000	CR79/U + Frequency	3098-450-76	/63	Electro Dynamics Crystal Corp.
*CR79/U 2M900000 thru 20M00000	CR79/U + Frequency	3098-261-68	/63	M-tron Industries, Inc.
*CR79/U 2M900000 thru 20M00000	CR79/U + Frequency	3098-494-66	/63	McCoy Electronics Co. (1, 2)
*CR79/U 2M900000 thru 20M00000	CR79/U + Frequency	3098-996-78	/63	U. S. Crystal Corp.
*CR79/U 2M900000 thru 20M00000	CR79/U + Frequency	3098-480-82	/63	Valpey-Fisher Corp.
*CR80/U 50M00000 thru 125M0000	CR80/U + Frequency	QA-180/D3 28 Jan 1969	/57	Croven, Ltd.
*CR80/U 50M00000 thru 125M0000	CR80/U + Frequency	3098-520-68	/57	Electro Dynamics Crystal Corp.
*CR80/U 50M00000 thru 125M0000	CR80/U + Frequency	3098-1092-64	/57	McCoy Electronics Co. (1, 2)
*CR80/U 50M00000 thru 125M0000	CR80/U + Frequency	3098-997-78	/57	U. S. Crystal Corp.
*CR80/U 50M00000 thru 125M0000	CR80/U + Frequency	3098-482-82	/57	Valpey-Fisher Corp.
*CR81/U 24M00000 thru 62M00000	CR81/U + Frequency	QA-277/LD3 4 Jan 1968	/58	Croven, Ltd.
*CR81/U 18M00000 thru 61M00000	CR81/U + Frequency	3098-815-67 3098-154-84	/58	Electro Dynamics Crystal Corp.
*CR81/U 17M00000 thru 61M00000	CR81/U + Frequency	3098-280-73	/58	M-tron Industries, Inc.
*CR81/U 17M00000 thru 62M00000	CR81/U + Frequency	3098-1091-64	/58	McCoy Electronics Co. (1, 2)
*CR81/U 17M00000 thru 65M00000	CR81/U + Frequency	3098-693-79	/58	U. S. Crystal Corp.
*CR81/U 17M00000 thru 65M00000	CR81/U + Frequency	3098-484-82	/58	Valpey-Fisher Corp.

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*CR82/U 50M00000 thru 125M0000	CR82/U + Frequency	QA-180/D3 28 Jan 1969	/59	Croven, Ltd.
*CR82/U 50M00000 thru 125M0000	CR82/U + Frequency	3098-520-68	/59	Electro Dynamics Crystal Corp.
*CR82/U 50M00000 thru 125M0000	CR82/U + Frequency	3098-1092-64	/59	McCoy Electronics Co. (1, 2)
*CR82/U 50M00000 thru 125M0000	CR82/U + Frequency	3098-997-78	/59	U. S. Crystal Corp.
*CR82/U 50M00000 thru 125M0000	CR82/U + Frequency	3098-482-82	/59	Valpey-Fisher Corp.
*CR83/U 50M00000 thru 125M0000	CR83/U + Frequency	QA-180/D3 28 Jan 1969	/60	Croven, Ltd.
*CR83/U 50M00000 thru 125M0000	CR83/U + Frequency	3098-520-68	/60	Electro Dynamics Crystal Corp.
*CR83/U 50M00000 thru 125M0000	CR83/U + Frequency	3098-1092-64	/60	McCoy Electronics Co. (1, 2)
*CR83/U 50M00000 thru 125M0000	CR83/U + Frequency	3098-997-78	/60	U. S. Crystal Corp.
*CR83/U 50M00000 thru 125M0000	CR83/U + Frequency	3098-482-82	/60	Valpey-Fisher Corp.
*CR84/U 24M00000 thru 61M00000	CR84/U + Frequency	QA-277/LD3 4 Jan 1968	/61	Croven, Ltd.
*CR84/U 18M00000 thru 61M00000	CR84/U + Frequency	3098-814-67 3098-154-84	/61	Electro Dynamics Crystal Corp.
*CR84/U 17M00000 thru 61M00000	CR84/U + Frequency	3098-484-82	/61	Valpey-Fisher Corp.
*CR85/U 920K0000 thru 20M00000	CR85/U + Frequency	3098-35-71	/56	Bliley Electric Co.
*CR85/U 1M000000 thru 20M00000	CR85/U + Frequency	3098-1095-64	/56	McCoy Electronics co. (1, 2)
*CR85/U 800K0000 thru 20M00000	CR85/U + Frequency	3098-481-82	/56	Valpey-Fisher Corp.
*CR89/U 2M120000 thru 6M200000	CR89/U + Frequency	3098-35-71	/67(EL)	Bliley Electric Co.
*CR89/U 2M120000 thru 6M200000	CR89/U + Frequency	QA-118/ALD3 11 Dec 1967	/67(EL)	Croven, Ltd.
*CR89/U 2M120000 thru 6M200000	CR89/U + Frequency	3098-654-67	/67(EL)	M-tron Industries, Inc.
*CR89/U 2M120000 thru 6M200000	CR89/U + Frequency	3098-607-74	/67(EL)	McCoy Electronics Co. (1, 2)
*CR89/U 2M120000 thru 6M200000	CR89/U + Frequency	3098-481-82	/67(EL)	Valpey-Fisher Corp.
*CR96/U 3M600000 thru 9M250000	CR96/U + Frequency	3098-947-69	/71(USAF)	Electro Dynamics Crystal Corp.

GOVERNMENT DESIGNATION	MANUFACTURER'S DESIGNATION OR TYPE NUMBER	TEST OR QUALIFICATION REFERENCE	SPECIFI- CATION SHEET	MANUFACTURER'S NAME (ADDRESS ON LAST PAGE)
*CR97/U 8M000000 thru 10M00000	CR97/U + Frequency	QA-690/E2 2 Dec 1971	/72	Croven, Ltd.
*CR97/U 8M000000 thru 10M00000	CR97/U + Frequency	3098-106-66	/72	CTS Knights, Inc.
*CR97/U 8M000000 thru 10M00000	CR97/U + Frequency	3098-450-76	/72	Electro Dynamics Crystal Corp.
*CR97/U 8M000000 thru 10M00000	CR97/U + Frequency	3098-261-68	/72	M-tron Industries, Inc.
*CR97/U 8M000000 thru 10M00000	CR97/U + Frequency	3098-494-66	/72	McCoy Electronics Co. (1, 2)
*CR97/U 8M000000 thru 10M00000	CR97/U + Frequency	3098-996-78	/72	U. S. Crystal Corp.
*CR97/U 8M000000 thru 10M00000	CR97/U + Frequency	3098-480-82	/72	Valpey-Fisher Corp.
*CR98/U 50M00000 thru 134M0000	CR98/U + Frequency	3098-AF5-81 AF Ltr dtd 14 May 81	/73(USAF)	Electro Dynamics Crystal Corp.
*CR98/U 50M00000 thru 134M0000	CR98/U + Frequency	3098-AF2-75 AF Ltr dtd 28 Nov 75	/73(USAF)	McCoy Electronics Co. (1, 2)
*CR101/U 7M000000 thru 20M00000	CR101/U + Frequency	3098-32-88	/103	Electro Dynamic Crystal Corp.
*CR101/U 7M000000 thru 20M00000	CR101/U + Frequency	3098-588-91	/103	McCoy Electronics Co. (1, 2, 3)
*CR102/U 50M00000 thru 125M0000	CR102/U + Frequency	3098-273-82 thru 3098-275-82	/104	McCoy Electronics Co. (1)
*CR103/U 17M00000 thru 61M00000	CR103/U + Frequency	3098-865-82	/105	McCoy Electronics Co. (1)
*CR104/U 200K0000 thru 545K0000	CR104/U + Frequency	3098-AF1-74	/79(USAF)	Bliley Electric Co.
*CR105/U 48M00000 thru 125M0000	CR105/U + Frequency	3098-AF5-81 AF Ltr dtd 14 May 81	/80	Electro Dynamics Crystal Corp.
*CR105/U 48M00000 thru 125M0000	CR105/U + Frequency	3098-AF2-75 AF Ltr dtd 28 Nov 75	/80	McCoy Electronics Co. (1, 2)
*CR106/U 10M50000 thru 11M50000	CR106/U + Frequency	QA-690/E2 2 Dec 1971	/82	Croven, Ltd.
*CR106/U 10M50000 thru 11M50000	CR106/U + Frequency	3098-106-66	/82	CTS Knights, Inc.
*CR106/U 10M50000 thru 11M50000	CR106/U + Frequency	3098-450-76	/82	Electro Dynamics Crystal Corp.
*CR106/U 10M50000 thru 11M50000	CR106/U + Frequency	3098-261-68	/82	M-tron Industries, Inc.
*CR106/U 10M50000 thru 11M50000	CR106/U + Frequency	3098-494-66	/82	McCoy Electronics Co. (1, 2)
*CR106/U 10M50000 thru 11M50000	CR106/U + Frequency	3098-480-82	/82	Valpey-Fisher Corp.

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*CR107/U 50M00000 thru 125M0000	CR107/U + Frequency	3098-AF5-81 AF Ltr dtd 14 May 81	/83	Electro Dynamics Crystal Corp.
*CR107/U 50M00000 thru 125M0000	CR107/U + Frequency	3098-AF2-75 AF Ltr dtd 28 Nov 75	/83	McCoy Electronics Co. (1, 2)
*CR107/U 50M00000 thru 105M0000	CR107/U + Frequency	3098-AF-6-80	/83	U. S. Crystal Corp.
*CR108/U 50M00000 thru 93M00000	CR108/U + Frequency	3098-1670-64	/84(USAF)	McCoy Electronics Co. (1, 2)
*CR109/U 10M00000 thru 11M50000	CR109/U + Frequency	3098-579-79	/85(USAF)	Electro Dynamics Crystal Corp.
*CR110/U 62M50000 thru 75M00000	CR110/U + Frequency	3098-AF5-81 AF Ltr dtd 14 May 81	/86	Electro Dynamics Crystal Corp.
*CR110/U 62M50000 thru 75M00000	CR110/U + Frequency	3098-AF2-75 AF Ltr dtd 28 Nov 75	/86	McCoy Electronics Co. (1, 2)
*CR111/U 17M00000 thru 62M00000	CR111/U + Frequency	3098-AF2-76 AF Ltr dtd 16 Mar 76	/87	McCoy Electronics Co. (1, 2)
*CR112/U 5M000000 thru 20M00000	CR112/U + Frequency	3098-579-79	/88	Electro Dynamics Crystal Corp.
*CR112/U 5M000000 thru 20M00000	CR112/U + Frequency	3098-283-77	/88	McCoy Electronics Co. (1, 2)
*CR112/U 5M000000 thru 20M00000	CR112/U + Frequency	3098-483-82	/88	Valpey-Fisher Corp.
*CR113/U 18M00000 thru 56M00000	CR113/U + Frequency	3098-20-69	/89	Electro Dynamics Crystal Corp.
*CR113/U 14M50000 thru 61M00000	CR113/U + Frequency	3098-AF1-78 AF Ltr dtd 30 Aug 78	/89	McCoy Electronics Co. (1, 2)
*CR116/U 50M00000 thru 125M0000	CR116/U + Frequency	3098-AF5-81 AF Ltr dtd 14 May 81	/92	Electro Dynamics Crystal Corp.
*CR116/U 50M00000 thru 125M0000	CR116/U + Frequency	3098-AF1-75 AF Ltr dtd 17 Jul 75	/92	McCoy Electronics Co. (1, 2)
*CR116/U 50M00000 thru 125M0000	CR116/U + Frequency	3098-AF6-80 AF Ltr dtd 12 Jun 80	/92	U. S. Crystal Corp.
*CR116/U 50M00000 thru 125M0000	CR116/U + Frequency	3098-AF5-83 AF Ltr dtd 13 May 83	/92	Valpey-Fisher Corp.
*CR117/U 30M00000 thru 62M00000	CR117/U + Frequency	QA-277/LD3 4 Jan 1968	/93(USAF)	Croven, Ltd.
*CR117/U 30M00000 thru 61M00000	CR117/U + Frequency	3098-280-73	/93(USAF)	M-tron Industries, Inc.
*CR117/U 30M00000 thru 62M00000	CR117/U + Frequency	3098-1091-64	/93(USAF)	McCoy Electronics Co. (1, 2)
*CR117/U 30M00000 thru 63M00000	CR117/U + Frequency	3098-484-82	/93(USAF)	Valpey-Fisher Corp.

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*CR119/U 920K0000 thru 20M00000	CR119/U + Frequency	3098-35-71	/95	Bliley Electric Co.
*CR119/U 1M000000 thru 20M00000	CR119/U + Frequency	3098-1095-64	/95	McCoy Electronics Co. (1, 2)
*CR119/U 800K0000 thru 20M00000	CR119/U + Frequency	3098-481-82	/95	Valpey-Fisher Corp.
*CR122/U 50M00000 thru 125M0000	CR122/U + Frequency	3098-AF5-81 AF Ltr dtd 14 May 81	/99	Electro Dynamics Crystal Corp.
*CR122/U 50M00000 thru 125M0000	CR122/U + Frequency	3098-FL1-76 AF Ltr dtd 30 Jan 76	/99	McCoy Electronics Co. (1, 2)
*CR123/U 50M00000 thru 125M0000	CR123/U + Frequency	3098-AF5-81 AF Ltr dtd 14 May 81	/100	Electro Dynamics Crystal Corp.
*CR123/U 50M00000 thru 125M0000	CR123/U + Frequency	3098-AF1-76 AF Ltr dtd 30 Jan 76	/100	McCoy Electronics Co. (1, 2)
*CR125/U 1M850000 thru 3M050000	CR125/U + Frequency	3098-35-71	/102(USAF)	Bliley Electric Co.
*CR125/U 1M850000 thru 3M050000	CR125/U + Frequency	3098-1095-64	/102(USAF)	McCoy Electronics Co. (1, 2)
*CR125/U 1M850000 thru 3M050000	CR125/U + Frequency	3098-481-82	/102(USAF)	Valpey-Fisher Corp.
*CR127/U 10M00000 thru 61M00000	CR127/U + Frequency	3098-AF6-76 AF Ltr dtd 17 Dec 76	/106(USAF)	McCoy Electronics Co. (1, 2)
*CR128/U 17M00000 thru 61M00000	CR128/U + Frequency	3098-AF3-76 AF Ltr dtd 17 Mar 76	/108	McCoy Electronics Co. (1, 2)
*CR129/U 9M000000 thru 12M00000	CR129/U + Frequency	3098-579-79	/110	Electro Dynamics Crystal Corp.
*CR129/U 9M000000 thru 12M00000	CR129/U + Frequency	3098-283-77	/110	McCoy Electronics Co. (1, 2)
*CR129/U 9M000000 thru 12M00000	CR129/U + Frequency	3098/483-82	/110	Valpey-Fisher Corp.
*CR130/U 920K0000 thru 20M00000	CR130/U + Frequency	3098-35-71	/109	Bliley Electric Co.
*CR130/U 1M000000 thru 20M00000	CR130/U + Frequency	3098-1095-64	/109	McCoy Electronics Co. (1, 2)
*CR130/U 800K0000 thru 20M00000	CR130/U + Frequency	3098-481-82	/109	Valpey-Fisher Corp.
*CR131/U 920K0000 thru 20M00000	CR131/U + Frequency	3098-33-71	/120(EL)	Bliley Electric Co.
*CR131/U 1M000000 thru 20M00000	CR131/U + Frequency	3098-655-67	/120(EL)	M-tron Industries, Inc.
*CR131/U 1M000000 thru 20M00000	CR131/U + Frequency	3098-1095-64	/120(EL)	McCoy Electronics Co. (1, 2)
*CR131/U 800K0000 thru 20M00000	CR131/U + Frequency	3098-481-82	/120(EL)	Valpey-Fisher Corp.

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*CR134/U 18M00000 thru 12M00000	CR134/U + Frequency	3098-579-79	/113	Electro Dynamics Crystal Corp.
*CR134/U 18M00000 thru 21M00000	CR134/U + Frequency	3098-283-77	/113	McCoy Electronics Co. (1, 2)
*CR134/U 18M00000 thru 21M00000	CR134/U + Frequency	3098-483-82	/113	Valpey-Fisher Corp.
*CR135/U 10M00000 thru 12M00000	CR135/U + Frequency	3098-579-79	/114(USAF)	Electro Dynamics Crystal Corp.
*CR136/U 8M000000 thru 10M00000	CR136/U + Frequency	3098-579-79	/115	Electro Dynamics Crystal Corp.
*CR136/U 8M000000 thru 10M00000	CR136/U + Frequency	3098-283-77	/115	McCoy Electronics Co. (1, 2)
*CR136/U 8M000000 thru 10M00000	CR136/U + Frequency	3098-483-82	/115	Valpey-Fisher Corp.
*CR137/U 8M500000 thru 19M00000	CR137/U + Frequency	3098-579-79	/116	Electro Dynamics Crystal Corp.
*CR137/U 8M500000 thru 19M00000	CR137/U + Frequency	3098-283-77	/116	McCoy Electronics Co. (1, 2)
*CR137/U 8M500000 thru 19M00000	CR137/U + Frequency	3098-483-82	/116	Valpey-Fisher Corp.
*CR139/U 20M00000 thru 22M00000	CR139/U + Frequency	QA-690/E2 2 Dec 1971	/118	Croven, Ltd.
*CR139/U 20M00000 thru 22M00000	CR139/U + Frequency	3098-106-66	/118	CTS Knights, Inc.
*CR139/U 20M00000 thru 22M00000	CR139/U + Frequency	3098-450-76	/118	Electro Dynamics Crystal Corp.
*CR139/U 20M00000 thru 22M00000	CR139/U + Frequency	3098-261-68	/118	M-tron Industries, Inc.
*CR139/U 20M00000 thru 22M00000	CR139/U + Frequency	3098-494-66	/118	McCoy Electronics Co. (1, 2)
*CR139/U 20M00000 thru 22M00000	CR139/U + Frequency	3098-480-82	/118	Valpey-Fisher Corp.
*CR141/U 50M00000 thru 90M00000	CR141/U + Frequency	QA-180/D3 28 Jan 1969	/122	Croven, Ltd.
*CR141/U 50M00000 thru 90M00000	CR141/U + Frequency	3098-520-68	/122	Electro Dynamics Crystal Corp.
*CR141/U 50M00000 thru 90M00000	CR141/U + Frequency	3098-1092-64	/122	McCoy Electronics Co. (1, 2)
*CR141/U 48M00000 thru 90M00000	CR141/U + Frequency	3098-482-82	/122	Valpey-Fisher Corp.
*CR142/U 833K3330	CR142/U + Frequency	3098-415-69 AF Ltr dtd 8 Mar 73	/123(USAF)	M-tron Industries, Inc.
*CR148/U 10M00000 thru 61M00000	CR148/U + Frequency	3098-AF5-83 AF Ltr dtd 13 May 83	/129(USAF)	Valpey-Fisher Corp.

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*CR149/U 46M00000 thru 100M0000	CR149/U + Frequency	3098-AF5-81 AF Ltr dtd 14 May 81	/130	Electro Dynamics Crystal Corp.
*CR149/U 46M00000 thru 100M0000	CR149/U + Frequency	3098-AF2-75 AF Ltr dtd 28 Nov 75	/130	McCoy Electronics Co. (1, 2)
*CR150/U 45M00000 thru 100M0000	CR150/U + Frequency	3098-420-72	/131(EL)	McCoy Electronics Co. (1, 2)
*CR151/U 50M00000 thru 100M0000	CR151/U + Frequency	3098-AF5-81 AF Ltr Dtd 14 May 81	/132(EL)	Electro Dynamics Crystal Corp.
*CR151/U 50M00000 thru 100M0000	CR151/U + Frequency	3098-AF2-75 AF Ltr dtd 28 Nov 75	/132(EL)	McCoy Electronics Co. (1, 2)
*CR152/U 16M00000 thru 61M00000	CR152/U + Frequency	3098-280-73	/133	M-tron Industries, Inc.
*CR152/U 16M00000 thru 61M00000	CR152/U + Frequency	3098-484-82	/133	Valpey-Fisher Corp.
*CR157/U 920K0000 thru 20M00000	CR157/U + Frequency	3098-35-71	/137	Bliley Electric Co.
*CR157/U 1M000000 thru 20M00000	CR157/U + Frequency	QA-118/ALD3 11 Dec 1967	/137	Croven, Ltd.
*CR157/U 1M000000 thru 20M00000	CR157/U + Frequency	3098-146-68	/137	Electro Dynamics Crystal Corp.
*CR157/U 1M000000 thru 20M00000	CR157/U + Frequency	3098-654-67	/137	M-tron Industries, Inc.
*CR157/U 1M800000 thru 20M00000	CR157/U + Frequency	3098-607-74	/137	McCoy Electronics Co. (1, 2)
*CR157/U 800K0000 thru 20M00000	CR157/U + Frequency	3098-692-79	/137	U. S. Crystal Corp.
*CR159/U 800K0000 thru 20M00000	CR159/U + Frequency	3098-587-91	/140	McCoy Electronics Co. (1, 2, 3)
*CR165/U 2M400000 thru 20M00000	CR165/U + Frequency	3098-148-89	/146	CTS Knights, Inc.
*CR165/U 2M400000 thru 20M00000	CR165/U + Frequency	3098-1024-87	/146	McCoy Electronics Co. (1)

MANUFACTURER'S NAME, ADDRESS AND PLANT	CAGE CODE
Bliley Electric Company 2545 West Grandview Boulevard Erie, PA 16512 Plant: Same Address	71034
Croven, Ltd. P.O. Box 420 Whitby, Ontario, Canada Plant: 500 Beech Street Whitby, Ontario, Canada	00809
CTS Knights, Inc. 400 Reimann Avenue Sandwich, IL 60548 Plant: Same Address	75378
Electro Dynamics Crystal Corp. 9075 Cody Street Overland Park, KS 66214 Plant: Same Address	18853
M-tron Industries, Inc. East Highway 50 Yankton, SD 57078 Plant: Same Address	23875
McCoy Electronics Company Chestnut and Watts Street Mount Holly Springs, PA 17065 Plants: 1. Same Address (Plant 2) 2. 80 Landis Dr. (Plant 3) Mercersburg, PA 17236 3. 95 Fox Road (Plant 4) Mercersburg, PA 17236	00136
U. S. Crystal Corporation 3605 McCart Street Fort Worth, TX 76110 Plant: Same Address	52847
Valpey-Fisher Corporation 75 South Street Hopkinton, MA 01748 Plant: Same Address	21821