

QUALIFIED PRODUCTS LIST
OF
PRODUCTS QUALIFIED UNDER MILITARY SPECIFICATION
MIL-R-55182
RESISTORS, FIXED, FILM, ESTABLISHED RELIABILITY
GENERAL SPECIFICATION FOR

This list has been prepared for use by or for the Government in the acquisition of products covered by Specification MIL-R-55182. Listing of a product is not intended to and does not connote endorsement 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 COMMUNICATIONS-ELECTRONICS COMMAND AND FORT MONMOUTH. The activity designated as agent for all contacts relative to this QPL is the Defense Supply Center Columbus (DSCC-VQ), Columbus, OH 43216-5000.

NOTES: An asterisk (*) adjacent to the product listing indicates that qualified parts listed on the QPL are available through distributors authorized by the manufacturer in accordance with Military Standard MIL-STD-790. Names and addresses of the distributors are listed in the back of this QPL. These lists are being furnished merely as an aid in identifying authorized sources of ER parts and the responsibility for complying with contractual provisions requiring use of such parts rests with the user of such parts. Such lists have been compiled from information furnished by the manufacturers of ER parts prior to release of this QPL.

Inclusion on, or omission from, the list of a particular distributor cannot be relied upon as a guarantee of such distributor's status since the information upon which the list is based may not have been complete and since authorized distributors are subject to change by the manufacturer at any time. Inclusion of a firm on such list is not, under any circumstance, to be considered an indorsement of such firm or its products by the Department of Defense.

Per Amendment 2 of MIL-R-55182/1 and MIL-R-55182/7 a requirement was added for a one-digit code to be marked on the resistor to identify each manufacturer. The codes for the manufacturers are as follows:

<u>COMPANY</u>	<u>CODE</u>
Angstrohm	A
Dale Electronics	D
Dale Electronics (Bradford Div.)	B
IRC (Boone)	R
IRC (Corpus Christi)	C
Vamistor	V

GOVERNMENT DESIGNATION	MANUFACTURER'S DESIGNATION OR TYPE NUMBER	TEST OR QUALIFICATION REFERENCE	DETAIL SPECIFI- CATION	MANUFACTURER'S NAME (ADDRESS ON LAST PAGE)
PART I				
RNC50, RNR50* Chars. H, J, and K, res. values 10 ohms thru 0.796 megohm; Chars. H and J, res. tols. B, D and F; char. K, res. tols. D and F; life failure rates M, P, R and S.	ERC-50 ERC-50-31	55182-1107-79 55182-304-87	/7	Dale Electronics, Inc. (1)
RNC50, RNN50, RNR50* Chars. H, J, and K, res. values 10.0 ohms thru 0.301 megohm; res. tol. F, life failure rates M, P, R, and S.	TJ-50	55182-748-86	/7	IRC, Inc.

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PART I				
RNC51, RNR51* Chars. H, J, and K, res. values 10.0 ohms thru 0.200 megohm; Chars. H and J, res. tols. B, D, and F; Char. K, res. tols. D and F, life failure rates M, P, R and S.	ERC50-12	55182-84-72	/11(EC)	Dale Electronics, Inc. (1)
RNN55, RNR55* Chars. C and E, res. values 10 ohms thru 301,000 ohms; res. tols. B, D and F; life failure rates M, P, R and S.	HN55 HS55 HT55 HY55	55182-425-89	/1	Angstrohm
RNN55, RNR55* Chars. C and E, res. values 24.9 ohms thru 1.210 megohm; res. tols. B, D and F; life failure rates M, P, R and S.	HDN55	55182-237-93	/1	Angstrohm
RNC55, RNR55* Chars. H, J, and K, res. values 10 ohms thru 2.000 megohms; chars. H and J, res. tols. B, D, and F; char. K, res. tols. D and F; life failure rates M, P, R and S.	ERC-55 ERC-55-65	55182-438-81 55182-304-87	/1	Dale Electronics, Inc. (1)
RNC55, RNR55* Chars. H, J, and K, res. values 10 ohms thru 0.301 megohm; chars. H and J, res. tols. B, D, and F; Char. K, res. tols. D and F; life failure rates M, P, R and S.	CJ55 CH55 CK55	55182-322-77 55182-1116-84	/1	Dale Electronics, Inc. (2)
RNC55, RNR55* Chars. H and J, res. values 309,000 ohms thru 1.0 megohm, res. tols. B, D and F, life failure rates M and P.	CHEX55 CJEX55	55182-368-89 55182-599-91	/1	Dale Electronics, Inc. (2)
RNC55, RNN55, RNR55* Chars. H, J, and K, res. values 10 ohms thru 1.000 megohm; chars. H and J, res. tols. B, D, and F; char. K, res. tols. D and F; chars. H, J, and K, res. values 1.000 megohm thru 2.000 megohms; res. tol. F, life failure rates M, P, R and S.	TH-55 TJ-55 TK-55	55182-1226-76	/1	IRC, Inc.
RNC55, RNN55, RNR55* Chars. C and E, res. values 200 ohms thru 100,000 ohms, res. tols. B, D, and F; life failure rates M, P, R, and S.	HS47-2A HS47-2C	55182-928-75	/1	Vamistor Corp.
RNC55, RNN55, RNR55* Chars. H, J, and K, res. values 200 ohms thru 100,000 ohms, res. tols. B, D, and F; life failure rates M, P, R, and S.	HR47-2A HR47-2C	55182-929-75	/1	Vamistor Corp.
RNC56, RNR56* Chars. H, J, and K. res. values 10.0 ohms thru 1.21 megohms; chars. H and J, res. tols. B, D, and F; Char. K, res. tols. D and F, life failure rates M, P, R, and S.	ERC-55-91	55182-590-82	/12(EC)	Dale Electronics, Inc. (1)
RNN57, RNR57* Chars. C and E. res. values 49.9 ohms thru 0.200 megohm; res. tol. F; life failure rates M, P, R, and S.	HN57 HS57 HT57 HY57	55182-45-74 55182-425-89	/2	Angstrohm

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PART I				
RNN60, RNR60* Chars. C and E, res. values 10.0 ohms thru 301,000 ohms; res. tols. B, D, and F; life failure rates M, P, R and S.	HN60 HS60 HT60 HY60	55182-425-89	/3	Angstrohm
RNN60, RNR60* Chars. C and E, res. values 305,000 ohms thru 2.490 megohms; res. tols. B, D, and F; life failure rates M, P, R, and S.	HS60 HY60	55182-425-89 HT60	/3	Angstrohm
RNC60* Chars. H, J, and K, res. values 10 ohms thru 2.000 megohms; Chars. H and J, res. tols. B, D, and F; Char. K, res. tols. D and F, life failure rates M, P, R, S; Chars. H, J and K, res. values 2.000 megohms thru 3.010 megohms, res. tols. D and F, life failure rate M.	ERC-55-200 ERC-55-201	55182-94-88 55182-542-88	/3	Dale Electronics, Inc. (1)
RNC60, RNR60* Chars. H and J, res. values 511,000 ohms thru 2.0 megohm, res. tols. B, D and F, life failure rates M and P.	CHEX60 CJEX60	55182-369-89 55182-600-91	/3	Dale Electronics, Inc. (2)
RNC60, RNN60, RNR60* Chars. H, J, and K, res. values 10 ohms thru 100,000 ohms; chars. H and J, res. tols. B, D, and F; life failure rates M, P, R and S.	TH-60 TJ-60 TK-60	55182-1227-76	/3	IRC, Inc.
RNC60, RNN60, RNR60* Chars. C and E, res. values 200 ohms thru 200,000 ohms, res. tols. B, D, and F; life failure rates M, P, R, and S.	HS482A HS482C	55182-930-75	/3	Vamistor Corp.
RNC60, RNN60, RNR60* Chars. H, J, and K, res. values 200 ohms thru 200,000 ohms, res. tols. B, D, and F; life failure rates M, P, R, and S.	HR482A HR482C	55182-931-75	/3	Vamistor Corp.
RNN65, RNR65* Chars. C and E, res. values 24.9 ohms thru 4.990 megohms; res. tols. B, D and F; life failure rates M and P.	HN65 HS65 HT65 HY65	55182-595-76 55182-425-89	/5	Angstrohm
RNN65, RNR65* Chars. C and E, res. values 24.9 ohms thru 348,000 ohms, res. tols. B, D and F; res. values 357,000 ohms thru 4.99 megohms, res. tol. F; life failure rates M and P.	HDN65	55182-124-96	/5	Angstrohm
RNC65, RNR65* Chars. H and J, res. values 10 ohms thru 3.01 megohms, res. tols. B, D, and F; char. K, res. values 10 ohms thru 3.01 megohms, res. tols. D and F; life failure rates M, P, and R.	ERC-65 ERC-65-65	55182-185-77 55182-304-87	/5	Dale Electronics, Inc. (1)
RNC65, RNN65, RNR65* Chars. C and E, res. values 200 ohms thru 499,000 ohms, res. tols. B, D, and F; life failure rates M, P, R, and S.	HS552A HS552C	55182-932-75	/5	Vamistor Corp.
RNC65, RNN65, RNR65* Chars. H, J, and K, res. values 200 ohms thru 499,000 ohms, res. tols. B, D, and F; life failure rates M, P, R, and S.	HR552A HR552C	55182-933-75	/5	Vamistor Corp.

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PART I				
RNN70, RNR70* Chars. C and E, res. values 24.9 ohms thru 4.99 megohms; res. tols. B, D, and F; life failure rates M and P.	HN70 HT70 HS70 HY70	55182-596-76 55182-425-89	/6	Angstrohm
RNN70, RNR70* Chars. C and E, res. values 24.9 ohms thru 237,000 ohms, res. tols. B, D and F; res. values 243,000 ohms thru 4.99 megohms, res. tol. F; life failure rates M and P.	HDN70	55182-124-96	/6	Angstrohm
RNC70, RNR70* Chars. H and J, res. values 10 ohms thru 3.01 megohms, res. tols. B, D, and F; char. K, res. values 10.0 ohms thru 3.01 megohms, res. tols. D and F; life failure rates M, P, and R.	ERC-70 ERC-70-4	55182-506-86 55182-304-87	/6	Dale Electronics, Inc. (1)
RNC70, RNN70, RNR70* Chars. C and E, res. values 200 ohms thru 250,000 ohms, res. tols. B, D, and F; life failure rates M, P, R, and S.	HS52-2A HS52-2C	55182-934-75	/6	Vamistor Corp.
RNC70, RNN70, RNR70* Chars. H, J, and K, res. values 200 ohms thru 250,000 ohms, res. tols. B, D, and F; life failure rates M, P, R, and S.	HR52-2A HR52-2C	55182-935-75	/6	Vamistor Corp.
RNC75, RNR75* Char. E, res. values 200 ohms thru 750,000 ohms, res. tols. B, D, and F; life failure rate M.	HS50-2A HS50-2C	55182-936-75	/10	Vamistor Corp.
RNC75, RNR75* Char. J, res. values 200 ohms thru 750,000 ohms, res. tols. B, D, and F; life failure rate M.	HR502A HR502C	55182-937-75	/10	Vamistor Corp.
RNC90* Char. Y, res. values 4.99 ohms thru 16.0 ohms, res. tols. B, D, and F; res. values 30.1 ohms thru 49.9k ohms, res. tols. A, B, D, F, T, and V; life failure rates M, P and R.	S555	55182-339-82 55182-340-82 55182-342-82 55182-1320-83 55182-58-90	/9	Vishay Resistive Systems Group (1)
RNC90* Char. Y, res. values 16.2 ohms thru 30.0 ohms, res. tols. A, B, D, and F; res. values 30.1 ohms thru 49.9k ohms, res. tols. A, B, D, F, T, and V; life failure rates M, P and R.	S555	55182-339-82 55182-340-82 55182-342-82 55182-1320-83 55182-58-90	/9	Vishay Resistive Systems Group (1)
RNC90* Char. Y, res. values 50.0k ohms thru 0.121 megohm, res. tols. A, B, D, F, T, and V; life failure rates M, P, and R.	S555	55182-339-82 55182-340-82 55182-342-82 55182-1320-83 55182-58-90	/9	Vishay Resistive Systems Group (1)
RNC90* Char. Y, res. values 100.0 ohms thru 100,000 ohms, res. tols. A, B, D, F, and T; life failure rates M, P, and R.	S554	55182-237-92	/9	Vishay Resistive Systems Group (1)
RNC90* Char. Z, res. values 100.0 ohms thru 100,000 ohms, res. tols. A, B, D, and F; life failure rates M, P, and R.	S900	55182-237-92	/9	Vishay Resistive Systems Group (1)
RNC90* Char. Y, res. values 100.0 ohms thru 50,000 ohms, res. tols. A, B, D, and F; life failure rates M, P, and R.	S555	55182-145-94	/9	Vishay Resistive Systems Group (2)
RNC90* Char. Y, res. values 50.1k ohms thru 100,000 ohms, res. tols. A, B, D, F, and T; life failure rate M.	S555	55182-066-96	/9	Vishay Resistive Systems Group (2)

PART II

The following products listed herein are reciprocal listings based on the NATO Standardization Agreement (STANAG) 4093 or International Standardization Agreements.

These devices are listed in the QPL of the concerned nation and, according to the qualifying authority of that nation, the devices meet the requirements for such listing. The products were completely manufactured, assembled, and tested in the concerned nation in accordance with the requirements of that nation. No review has been made by our qualifying activity of the manufacturing or test facilities or test report. Furthermore, no determination of equivalency has been conducted.

NOTE: No devices listed are to be JAN branded or marked with the failure rate level but should be marked with the appropriate national part numbers and identifiers, as applicable.

NATIONAL DEVICE SPECIFICATION	NATIONAL DEVICE SPECIFICATION	NATIONAL QPL	TEST REPORT NUMBER	MANUFACTURER'S NAME AND ADDRESS
RNC50 Char. H, res. values 47 ohms Bis 150 K ohms, res. tols. D and F.	396	VG 95 212	6656-4750- 1002/A4K 4 Apr 80	Roederstein Ludmillastrabe 23/25 Postfach 588/589 D-8300 Landshut/Bayern West Germany
RNC55 Char. H, res. values 10 ohms Bis 1 megohm, res. tols. B, D and F.	396	VG 95 212	6656-4750- 1002/A4K 14 Apr 80	Roederstein
RNC60 Char. H, res. values 10 ohms Bis 1 megohm, res. tols. B, D and F.	397	VG 95 212	6656-4750- 1002/A7K 11 Apr 83	Roederstein

MANUFACTURER'S NAME, ADDRESS AND PLANT	CAGE CODE
Angstrohm A Division of Vishay 18400 Precision Place Hagerstown, MD 21742 Plant: Same Address	17745
Dale Electronics, Inc. 1122 23rd Street P.O. Box 609 Columbus, NE 68601 Plants: 1. 2300 Riverside Blvd. Norfolk, NE 2. 550 High Street Bradford, PA 16701	91637 24546
IRC, Inc. International Resistive Company P.O. Box 1860 Boone, NC 28607 Plant: Greenway Road Boone, NC	11502
Vamistor Corporation 114 River Bend Drive Sevierville, TN 37862 Plant: Same Address	56856
Vishay Resistive Systems Group 63 Lincoln Highway Malvern, PA 19355 Plants: 1. Same Address 2. Vishay Israel, Ltd. 2 Ha'ofan Street Holon 58125, Israel	18612

AUTHORIZED ER DISTRIBUTORS: (Category A unless otherwise specified)

MANUFACTURER: Angstrohm Precision, Inc.
18400 Precision Place
Hagerstown, MD 21742

* NS - (NON-STOCKING: NORMALLY DOES NOT STOCK PARTS IN QUANTITY)

C & D Electronics 3010 W. Gandy Blvd., Suite 12 Tampa, FL 33611	*	Jaco Electronics 3029-107 Stonybrook Drive Raleigh, NC 27604	
C & D Electronics 90 Carando Drive Springfield, MA 01104	*	Jaco Electronics 145 Oser Avenue Hauppauge, L.I., NY 11787	
Command Electronics 42 Central Drive Farmingdale, L.I., NY 11735	*	Jaco Electronics 3247 Kellway Circle Addison, TX 75224	*
Dale Electronics, Inc. 2300 Riverside Boulevard Norfolk, NE 68701 (NOTE: Category B)		L & S Electronics 139 N. Central Avenue Valley Stream, NY 11580	*
G & A Sales P.O. Box 39398 2854 Blue Rock Road Cincinnati, OH 45239	*	L & S Electronics 21 Burns Lane Charleston, SC 29481	*
Jaco Electronics 23-441 South Point Drive, Suite 140 Laguna Hills, CA 92653	*	MMG Electronics/L & S 8831 49th Street N. Pinellas Park, FL 34665	*
Jaco Electronics 2880 Zanker Road Suite 202 San Jose, CA 95134	*	Mast Distributors, Inc. 710 Union Parkway Ronkonkoma, NY 11779	*
Jaco Electronics 2260 Townsgate Road Westlake Village, CA 91361	*	Micro Mil Division 446 Windsor Park Drive Dayton, OH 45459	*
Jaco Electronics 384 Pratt Street Meriden, CT 06450	*	Petell/Passive Components, Inc. 21113 Superior Street Chatsworth, CA 91311	*
Jaco Electronics 1060 Holland Drive Boca Raton, FL 33487	*	Passive Components, Inc. 1590 Oakland Road San Jose, CA 95131	*
Jaco Electronics 2102 Tech Boulevard Tampa, FL 33519	*	RESCO/Baltimore 4961 Mercantile Road Baltimore, MD 21236	
Jaco Electronics 1053 East Street Tewksbury, MA 01876		RESCO/Washington 10523 Ewing Road Beltsville, MD 20705	*
Jaco Electronics 10270-F Old Columbia Road Columbia, MD 21046		Kent Electronics, Inc. 549 S. 48th Street, Suite 104 Tempe, AZ 85281	*
		Kent Electronics, Inc. 9760 Owensmouth Avenue Chatsworth, CA 91311	*

MANUFACTURER: Angstrom Precision, Inc. (Continued)

Kent Electronics, Inc. 6195 Cornerstone Court East San Diego, CA 92121	*	T.T.I., Inc. 1535 McCandless Dr., Bldg. 11 Milipitas, CA 95035	*
Kent Electronics, Inc. 1520 Montague Expressway San Jose, CA 95131	*	T.T.I., Inc. 10200 Sepulveda Blvd., Suite 380 Mission Hills, CA 91345	*
Kent Electronics, Inc. 1500 West Hampden, Bldg. 4 Englewood, CO 80110	*	T.T.I., Inc. 13220 Evening Creek Drive, S. San Diego, CA 92128	*
Kent Electronics, Inc. 9280 Bay Plaza Boulevard Tampa, FL 33619-9627	*	T.T.I., Inc. 1570 Brookhollow, Suite 103 Santa Ana, CA 92705	*
Kent Electronics, Inc. 5300 N. Park Place, N.E., Suite 110 Cedar Rapids, IA 52402	*	T.T.I., Inc. 6800 N. Broadway, Suite 107 Denver, CO 80221	*
Kent Electronics, Inc. 2190 N. Gladstone Court Glendale Heights, IL 60139	*	T.T.I., Inc. 8 Fairfield Boulevard Wallingford, CT 06492	*
Kent Electronics, Inc. 21 Alpha Road Chelmsford, MA 01824	*	T.T.I., Inc. 6220 South Orange Blossom Trail Suite 516 Orlando, FL 32809	*
Kent Electronics, Inc. 2515 Wabash Avenue St. Paul, MN 55114 (Category B)	*	T.T.I., Inc. 2979-A Pacific Drive Norcross, GA 30071	*
Kent Electronics, Inc. 5494 Brown Road Hazelwood, MO 63042	*	T.T.I., Inc. 100 Research Drive Wilmington, MA 01887	*
Kent Electronics, Inc. 3121-B South Dodgion Independence, MO 64055	*	T.T.I., Inc. 6420 Dobbin Road Columbia, MD 21045	*
Kent Electronics, Inc. 1727 North Ocean Avenue Medford, NY 11763	*	T.T.I., Inc. 12301 Whitewater Drive Minnetonka, MN 55343	*
Kent Electronics, Inc. 15209 N.E. 95th Redmond, WA 98052	*	T.T.I., Inc. 5500-77 Center Drive Charlotte, NC 28217	*
Texas Components Corp. 1716 W. Sam Houston Parkway Houston, TX 77043	*	T.T.I., Inc. 100 Century Parkway, Suite 120 Mt. Laurel, NJ 08054	*
T.T.I., Inc. 4625 S. Wendler Drive, Suite 108 Tempe, AZ 85282	*	T.T.I., Inc. 921 South Second Street Ronkonkoma, NY 11779	*

MANUFACTURER: Angstrom Precision, Inc. (Continued)

T.T.I., Inc. *
670-A Lakeview Plaza Boulevard
Columbus, OH 43085

T.T.I., Inc. (HQ)
2441 Northeast Parkway
Fort Worth, TX 76101-1896 (Category B)

T.T.I., Inc. *
7539 Airport Freeway
Fort Worth, TX 76118

T.T.I. International
4096 Sandshell Drive
Fort Worth, TX 76137

T.T.I., Inc. *
9577 N.E. 153rd Avenue
Redmond, WA 98052

AUTHORIZED ER DISTRIBUTORS: (Category A unless otherwise specified)

MANUFACTURER: Dale Electronics, Inc.
Bradford Division
550 High Street
Bradford, PA 16701-0930

* NS - (NON-STOCKING: NORMALLY DOES NOT STOCK PARTS IN QUANTITY)

Avnet EMG
11333 Pagemill Road
Dallas, TX 75243-8399

Bell Industries
EDD Dayton Division
446 Windsor Park Drive
Dayton, OH 45459

Kent Electronics *
6195 Cornerstone Court, E.
San Diego, CA 92121

Kent Electronics, Inc.
7433 Harwin Drive
Houston, TX 77036-2015

New Yorker Electronics Co., Inc.
420 Center Avenue
Mamaroneck, NY 10543

T.T.I., Inc. *
15535 San Fernando Mission Boulevard
Mission Hills, CA 91345

T.T I., Inc.
1570 Brookhollow, Suite 103
Santa Ana, CA 92705

T.T.I., Inc. *
4700 Rockside Road
Independence, OH 44131

T.T.I., Inc.
2441 Northeast Parkway
Fort Worth, TX 76101-1896
(NOTE: Category B - MIL-R-55182 only)

Tri-Start Electronics, Inc.
134 Remington Boulevard
Ronkonkoma, NY 11779

Williams Component Services, *
Inc.
200 Union Bower Court, Suite 220
Irving, TX 75061-5806
(NOTE: Category B-Retinning Only
39007, 39009, 39017. 55182)

AUTHORIZED ER DISTRIBUTORS: (Category A unless otherwise specified)

MANUFACTURER: Dale Electronics, Inc.
1122 23rd Street, P.O. Box 609
Columbus, NE 68602-0609

* NS - (NON-STOCKING: NORMALLY DOES NOT STOCK PARTS IN QUANTITY)

Avnet EMG
11333 Pagemill Road
Dallas, TX 75243-8399

Bell Industries
EDD Dayton Division
446 Windsor Park Drive
Dayton, OH 45459

Capstone Electronics, Inc.
3254 Fraser Street
Aurora, CO 80011

Jaco Electronics, Inc.
145 Oser Avenue
Hauppauge, NY 11788

Kent Electronics, Inc.
7433 Harwin Drive
Houston, TX 77036-2015

Loras Industries, Inc.
2640 Freewood Drive
Dallas, TX 75220
(NOTE: Category B-Hot Solder Dip Only
39007, 39009, 39017, 55182)

New Yorker Electronics Co., Inc.
420 Center Aenue
Mamaroneck, NY 10543

Ohmtek
2160 Liberty Drive
Niagara Falls, NY 14304
(NOTE: MIL-R-55342 only)

T.T.I., Inc. *
15535 San Fernando Mission Blvd.
Suite 319
Mission Hills, CA 91345

T.T I., Inc. *
1570 Brookhollow, Suite 103
Santa Ana, CA 92705

T.T.I., Inc. *
4700 Rockside Road
Independence, OH 44131

T.T.I., Inc.
2441 Northeast Parkway
Fort Worth, TX 76101-1896
(NOTE: Category B - MIL-R-55182 only)

Tri-Start Electronics, Inc.
134 Remington Boulevard
Ronkonkoma, NY 11779

AUTHORIZED ER DISTRIBUTORS: (Category A unless otherwise specified)

MANUFACTURER: IRC, Inc.	IRC, Inc.	IRC, Inc.	IRC, Inc.
Greenway Road	Route 181	401 North Broad Street	4222 South Staples Street
Boone, NC 28607	Newland, NC 28657	Philadelphia, PA 19108	Corpus Christi, TX 78411

* NS - (NON-STOCKING: NORMALLY DOES NOT STOCK PARTS IN QUANTITY)

Bell Industries
1401 S. Lindon Lane
Tempe, AZ 85281

Bell Industries
3433 East Washington Boulevard
Fort Wayne, IN 46803

Bell Industries
30101 Aquora Court
Aquora Hills, CA 91301

Bell Industries
5230 West 79th Street
P.O. Box 6885
Indianapolis, IN 46268

Bell Industries
11095-D Knott Avenue
Cypress, CA 90630

Bell Industries
Micro-Mil Division
446 Windsor Park Drive
Dayton, OH 45459

Bell Industries
306 East Alondra Boulevard
Gardena, CA 92048

Bell Industries
6024 Southwest Jean Road
Lake Oswego, OR 97034

Bell Industries
11812 San Vicente Blvd., Suite 300
Los Angeles, CA 90049

Bell Industries
1701 Greeneville, Suite 306
Richardson, TX 75081

Bell Industries
4311 Anthony Court, #100
Rocklin, CA 95677

Bell Industries
6912-B South 185, W.
Midvale, UT 84047

Bell Industries
7827 Convoy Court, #403
San Diego, CA 92111

Bell Industries
226 N. 900 Eastmound Drive
Waukesha, WI 53186

Bell Industries
15120 Marquardt Avenue
Santa Fe Springs, CA 90670

C & D Electronics
90 Carando Drive
Springfield, MA 01104

Bell Industries
1161 North Fair Oaks Avenue
Sunnyvale, CA 94086

Capstone
1180 Murphy Avenue
San Jose, CA 95131

Bell Industries
12421 West 49th Avenue
Wheatridge, CO 80033

Capstone
2961 Dow Avenue
Tustin, CA 92680

Bell Industries
600 South North Lake Blvd., Suite 400
Altamonte Springs, FL 32701

Capstone
3254 Fraser Street
Aurora, CO 80011

Bell Industries
638 South Military Trail
Deerfield Beach, FL 33442

Capstone
1100 West Thorndale Avenue
Itasca, IL 60143

Bell Industries
3020-A Business Park Drive
Norcross, GA 30071

Capstone
25 Upton Drive
Wilmington, MA 01887

Bell Industries
870 Cambridge
Elk Grove Village, IL 60007

MANUFACTURER: IRC, Inc. (Continued)

Capstone
5230 Green's Dairy Road
Raleigh, NC 27604

Jaco Electronics *
2282 Townsgate Road
Westlake Village, CA 91361

Capstone
500 Fellowship Road
Mt. Laurel, NJ 08054

Jaco Electronics
384 Pratt Street
Meriden, CT 06450

Capstone
500 Horseblock Road
Brookhaven, NY 11719

Jaco Electronics
1202 Tech Boulevard, Suite 200-A
Tampa, FL 33619

Capstone
3220 Commander Drive
Carrollton, TX 75006

Jaco Electronics
6035-J Atlantic Boulevard
Norcross, GA 30071

Dee Electronics *
2500 16th Avenue SW
Cedar Rapids, IA 51406

Jaco Electronics/QC
1053 East Street
Tewksbury, MA 01876

E M C
1945 I-85 South
Charlotte, NC 28208

Jaco Electronics
10270 Old Columbia
Columbia, MD 20144

E M C *
1150 West Third Ave.
Columbus, OH 43212

Jaco Electronics
3029-107 Stonybrook Drive
Raleigh, NC 27604

E M C
14 Alpha Park
Highland Heights, OH 44143

Jaco Electronics *
145 Oser Avenue
Hauppauge, L.I., NY 11787 (Category B)

E M C
4660 Gateway Circle
Kettering, OH 45440

Jaco Electronics/QC
3158 S. 108 East Avenue, Suite 274
Tulsa, OK 74146

Future Electronics
239 Hymus Boulevard
Pointe Claire, Quebec, Canada H9R 5C7

Jaco Electronics/QC
4257 Kellway Circle
Addison, TX 75244

Gerber Electronics *
128 Carnegie Row
Norwood, MA 02062

Jaco Electronics/QC
2120-M Braker Lane
Austin, TX 78758

Jaco/Distel, Inc.
23-441 South Point Drive
Laguna Hills, CA 92655

Jaco Electronics/QC
1005 Industrial Boulevard
Sugarland, TX 77478

Jaco/Distel, Inc.
2880 Zanker Road, Suite 202
San Jose, CA 95134

Justin Electronics *
3300 Highway 421 North
Wilmington, NC 28402 (Category B)

Jaco/Distel, Inc.
15014 N.E. 40th Street
Bldg. O, Unit 202
Redmond, WA 98052

MS Electronics
8031 Cessna Avenue
Gaithersburg, MA 20879

MANUFACTURER: IRC, Inc. (Continued)

Marsh Electronics 1563 South 101th Street Milwaukee, WI 53214	*
Neumann Electronics 7964-C Arjons Drive San Diego, CA 92126	*
Newark Electronics 4801 N. Ravenswood Chicago, IL 60640	*
New Yorker Electronics 1103 W. Hibiscus Boulevard Melbourne, FL 32901	
New Yorker Electronics 420 Center Avenue Mamaroneck, NY 10543	*
OHM/Resource 746 Vermont Street Palatine, IL 60067	*
Passive Components. Inc. 21113 Superior Street Chatsworth, CA 91311	*
Projections Unlimited 14831 Myford Road Tustin, CA 92680	
Radar Electric 168 Western Avenue, W. Seattle, WA 98119	*
Repco Electronics, Inc. 6561 Cochran Road Solon, OH 44139	*
Resco/Baltimore 4961 Mercantile Road Baltimore, MD 21236	*
Schuten Electronics 4815 Butterfield Road Hillside, IL 60162	*
Spirit Electronics 7819 East Greenway, Suite 9 Scottsdale, AZ 85269	*
Summit Electronics 916 Main Street Buffalo, NY 14202	*
Summit Electronics 292 Commerce Drive Rochester, NY 14623	

AUTHORIZED ER DISTRIBUTORS: (Category A unless otherwise specified)

MANUFACTURER: Vamistor Corporation
 115 Industrial Park
 Sevierville, TN 37862

* NS - (NON-STOCKING: NORMALLY DOES NOT STOCK PARTS IN QUANTITY)

Accutronics International, Inc. 1745 Merrick Avenue Merrick, NY	*	Jaco/QC 10707 Corporate Drive Stafford, TX 77477	*
Accutronics International 1092 Johnnie Dodds Boulevard Mt. Pleasant, SC 29464	*	Jaco/Distel, Inc. 15014 N.E. 40th Street Redmond, WA 98052	*
C & D Electronics 90 Carando Drive Springfield, MA 01104	*	Justin Electronics 3300 Highway 421 North Wilmington, NC 28402 (CATEGORY B)	
Jaco/Distel, Inc. 2880 Zanker Road, Suite 202 San Jose, CA 95134	*	M-Tron Components 2110-1 Smithtown Avenue Ronkonkoma, NY 11779	*
Jaco Electronics 1541 Parkway Loop Tustin, CA 92680	*	Marlac Electronics 311 New Albany Road Morrestown, NJ 08057	*
Jaco Electronics 2282 Townsgate Road Westlake, CA 91316		Passive Components 20645 Bahama Street Chatsworth, CA 91311	
Jaco Electronics 9900 West Sample Road Coral Springs, FL 33065		Passive Components 1590 Oakland Road, Suite 8101 San Jose, CA 95131	*
Jaco/QC 1202 Tech Boulevard Tampa, FL 33691		Patriot Electronics 133 Diamond Avenue East Meadow, NY 11788	*
Jaco Electronics, Inc. 1053 East Street Tewksbury, MA 10876	*	R.S. Electronics 555 Sparkman Drive, Suite 1606 Huntsville, AL 35816	*
Jaco Electronics 10270 Old Columbia Road Columbia, MD 21046	*	R.S. Electronics 1885-A Beaver Ridge Circle Norcross, GA 30071	*
Jaco/QC 5206 Green's Dairy Road Raleigh, NC 27604	*	R.S. Electronics 8645 Keystone Crossing, Suite 115 Indianapolis, IN 46240	*
Jaco Electronics 145 Oser Avenue Hauppauge, NY 11787		R.S. Electronics 6405 Metcalf Road, Suite 303 Overland Park, KS 66202	*
Jaco/QC 4257 Kellway Circle Addison, TX 75244	*	R.S. Electronics 2555 Metro Boulevard Maryland Height, MD 63043	*
Jaco/QC 2120-M Braker Lane Austin, TX 78758	*	R.S. Electronics 2442 East Maple Road Flint, MI 48507	*

MANUFACTURER: Vamistor Corp.

R.S. Electronics *
3645 Linden Avenue, Suite 203
Grand Rapids, MI 49548

R.S. Electronics *
Route 2
Irons, MI 49644

R.S. Electronics
34443 Schoolcraft Road
Livonia, MI 48150

R.S. Electronics *
295 Oser Avenue
Hauppauge, NY 11787

R.S. Electronics *
1360 Tomohawk Road
Maumee, OH 43537

Sound Electronics
1135 Halls Farm Road
Southport, CT 06490

Summit *
916 Main Street
Buffalo, NY 14202

Summit *
292 Commerce Drive
Rochester, NY 14623

Tri-Start Electronics *
2205 Brandon Station Road
Pleasant Garden, NC 27313

Tri-Start Electronics *
227 Fairfield Road, Suite 319-A
Fairfield, NJ 07004

Tri-Start Electronics *
523 E. Genesse Street
Fayetteville, NY 13066

Tri-Start Electronics
134 Remington Boulevard
Ronkonkoma, NY 11779

Tri-Start Electronics *
600 Valley Road, E-10
Warrington, PA 18976

Tri-Start Electronics *
392 Meeting Street
Charleston, SC 29403

AUTHORIZED ER DISTRIBUTORS: (Category A unless otherwise specified)

MANUFACTURER: Vishay Resistive Systems Group
63 Lincoln Highway
Malvern, PA 19355

* NS - (NON-STOCKING: NORMALLY DOES NOT STOCK PARTS IN QUANTITY)

Bell Industries 555 Sparkman Drive, Suite 600D Huntsville, AL 35816	*	Bell Industries 525 Airport North Office Park Fort Wayne, IN 46825	*
Bell Industries 10611 N. Hayden Road, Suite D-103 Scottsdale, AZ 85260	*	Bell Industries P.O. Box 6885 Indianapolis, IN 46268-0885	*
Bell Industries 30101 Aquora Court, Suite 118 Aquora Hills, CA 91301	*	Bell Industries 100 Burt Road, #106 Andover, MA 01810	*
Bell Industries 220 Technology Drive, Suite 100 Irvine, CA 92718	*	Bell Industries 8945 Guilford Road, #130 Columbia, MD 21046-1409	*
Bell Industries 11812 San Vicente Blvd., Suite 300 Los Angeles, CA 90049	*	Bell Industries 271 Route 46 W., Suites F202-203 Fairfield, NJ 07004	*
Bell Industries 3001 Douglas Boulevard, Suite 205 Roseville, CA 95661	*	Bell Industries 158 Gaither Drive, Suite 110 Mt. Laurel, NJ 08054	*
Bell Industries 5520 Ruffin Road, #103 San Diego, CA 92123-1320	*	Bell Industries 11728 Linn, N.E. Albuquerque, NM 87123	*
Bell Industries 15200 Marquardt Avenue Santa Fe Springs, CA 90670	*	Bell Industries 444 Windsor Park Drive Dayton, OH 45459	*
Bell Industries 1161 North Fair Oaks Avenue Sunnyvale, CA 94086	*	Bell Industries 31200 Solon Road, Suite 12 Solon, OH 44139	*
Bell Industries 9351 Grant Street, Suite 460 Thornton, CO 80229	*	Bell Industries 9275 S.W. Nimbus Avenue Beaverton, OR 97005-7132	*
Bell Industries 1064 E. Main Street Meridan, CT 06450	*	Bell Industries 1701 Greeneville, Suite 306 Richardson, TX 75081	*
Bell Industries 650 South North Lake Blvd., Suite 400 Altamonte Springs, FL 32701	*	Bell Industries 6912 S. 185 West, Suite B Midvale, UT 84047	*
Bell Industries 3000-D Business Park Drive Norcross, GA 30071	*	Bell Industries 1715 114th Avenue, S.E., Suite 208 Bellevue, WA 98004	*
Bell Industries 870 Cambridge Elk Grove Village, IL 60007-2437	*	Hamilton Hallmark 4890 University Drive, Suite 1 Huntsville, AL 35805-6229	*

MANUFACTURER: Vishay Resistive Systems Group (Continued)

Hamilton Hallmark 4637 South 36th Place Phoenix, AZ 85040	*	Hamilton Hallmark 3425 Corporate Way, Suites A & G Duluth, GA 30136	*
Hamilton Hallmark 1626 S. Edward Drive Tempe, AZ 85281	*	Hamilton Hallmark 1130 Thorndale Avenue Bensenville, IL 60106	*
Hamilton Hallmark 7400 N. Oracle Street Tucson, AZ 85704	*	Hamilton Hallmark 655 W. Carmel Drive, Suite 160 Carmel, IN 46032	*
Hamilton Hallmark 3170 Pullman Street Costa Mesa, CA 92626	*	Hamilton Hallmark 10809 Lakeview Drive Lenexa, KS 66215	*
Hamilton Hallmark P.O. Box 2647 Culver City, CA 90230	*	Hamilton Hallmark 1847-G Mercer Road Lexington, KY 40511	*
Hamilton Hallmark 580 Menlo Drive, Suite 2 Rocklin, CA 95677	*	Hamilton Hallmark 10-D Centennial Drive Peabody, MA 01960	*
Hamilton Hallmark 4545 Viewridge Avenue San Diego, CA 92123	*	Hamilton Hallmark 7134 Columbia Gateway Circle Columbia, MD 21046-2101	*
Hamilton Hallmark 2105 Lundy Avenue San Jose, CA 95131	*	Hamilton Hallmark 44191 Plymouth Oaks Blvd. Plymouth, MI 48170	*
Hamilton Hallmark 21150 Califa Street Woodland Hills, CA 91367	*	Hamilton Hallmark 9401 James Avenue S., Suite 140 Bloomington, MN 55431	*
Hamilton Hallmark 710 Wooten Road, Suite 28 Colorado Springs, CO 80915	*	Hamilton Hallmark 3783 Rider Trail, S. Earth City, MO 63045	*
Hamilton Hallmark 12503 E. Euclid Drive, Suite 20 Englewood, CO 80111	*	Hamilton Hallmark 5234 Green's Dairy Road Raleigh, NC 27604	*
Hamilton Hallmark 125 Commerce Court, Unit 6 Cheshire, CT 06410	*	Hamilton Hallmark 1 Keystone Avenue, Bldg. 36 Cherry Hill, NJ 08003	*
Hamilton Hallmark 3350 N.W. 53rd Street, Suites 105-107 Ft. Lauderdale, FL 33309	*	Hamilton Hallmark 10 Lanidex Plaza West Parsippany, NJ 07054-2715	*
Hamilton Hallmark 10491 72nd Street, N. Largo, FL 34647	*	Hamilton Hallmark 7801 Academy Road, Bldg. 1, Suite 102 Albuquerque, NM 87109	*
Hamilton Hallmark 7079 University Boulevard Winter Park, FL 32792	*	Hamilton Hallmark 390 Rabro Drive Hauppauge, NY 11788	*

MANUFACTURER: Vishay Resistive Systems Group (Continued)

Hamilton Hallmark 1057 Henrietta Road Rochester, NY 14623	*	Jaco Electronics 1610-A Berryessa Road San Jose, CA 95134	*
Hamilton Hallmark 7760 Washington Village Drive Dayton, OH 45459	*	Jaco Electronics 1541-A Parkway Loop Tustin, CA 92680	*
Hamilton Hallmark 5821 Harper Road Solon, OH 44139	*	Jaco Electronics 2282 Townsgate Road, Suite 100 Westlake, CA 91316	*
Hamilton Hallmark 777-L Dearborn Park Lane Worthington, OH 43085	*	Jaco Electronics P.O. Box 471 Erie, CO 80516	*
Hamilton Hallmark 12606 E. 51st Street Tulsa, OK 74147	*	Jaco Electronics 9900 West Sample Road, Suite 404 Coral Springs, FL 33065	*
Hamilton Hallmark 9750 S.W. Nimbus Avenue Beaverton, OR 97005-7132	*	Jaco Electronics 593 Learning Court Lawrenceville, GA 30244	*
Hamilton Hallmark 12211 Technology Boulevard Austin, TX 78759	*	Jaco Electronics, Inc. 1053 East Street Tewksbury, MA 10876	*
Hamilton Hallmark 11420 Pagemill Drive Dallas, TX 75243	*	Jaco Electronics 10270-F Old Columbia Road Columbia, MD 21046	*
Hamilton Hallmark 11-A Founders Boulevard El Paso, TX 79906	*	Jaco Electronics 10340 Viking Drive, Suite 115 Eden Prairie, MN 55344	*
Hamilton Hallmark 1406 N. 28th Street, Suite 105 Harlingen, TX 78550	*	Jaco Electronics 5206 Green's Dairy Road Raleigh, NC 27604-4612	*
Hamilton Hallmark 8000 Westglen Houston, TX 77063	*	Jaco Electronics 145 Oser Avenue Hauppauge, NY 11787	*
Hamilton Hallmark 1100 E. 6600 S., Suite 120 Salt Lake City, UT 84121	*	Jaco Electronics 4900 S.W. Griffith Drive, Suite 129 Beaverton, OR 97005	*
Hamilton Hallmark 8214 154th Avenue, N.E. Redmond, WA 98052-3556	*	Jaco Electronics 2120-A Braker Lane Austin, TX 78758	*
Hamilton Hallmark 2440 S. 179th Street New Berlin, WI 53146	*	Jaco Electronics 1209 N. Glenville Richardson, TX 75081	*

MANUFACTURER: Vishay Resistive Systems Group (Continued)

Kent Electronics 4900-D Corporate Drive Huntsville, AL 35805	*	Kent Electronics P.O. Box 677 Pine Brook, NJ 07058	*
Kent Electronics 15455 N. Greenway-Hayden Loop Scottsdale, AZ 85260	*	Kent Electronics 2191 George Urban Road Depew, NY 14043	*
Kent Electronics 17815-R Newhope Street Fountain Valley, CA 92708	*	Kent Electronics 117 West Liberty Street Rome, NY 13440	*
Kent Electronics 1830 McCandless Drive Milpitas, CA 95035	*	Kent Electronics 31200 Solon Road, Suite 12 Solon, OH 44139	*
Kent Electronics 6195 Cornerstone Court E., Suite 114 San Diego, CA 92121	*	Kent Electronics 9770 S.W. Nimbus Avenue Beaverton, OR 97005	*
Kent Electronics 361-H Inverness Drive, S. Englewood, CO 80112	*	Kent Electronics 11500 Metric Boulevard, Suite 410 Austin, TX 78758-4031	*
Kent Electronics 29-A Village Lane Wallingford, CT 06492	*	Kent Electronics 7433 Harwin Drive Houston, TX 77036-2015	*
Kent Electronics 6355 Metrowest Blvd., Suite 240 Orlando, FL 32835	*	Kent Electronics 1360 Presidential Drive, Suite 170 Richardson, TX 75081-2437	*
Kent Electronics 5340 N. Park Place, N.E. Suite 110 Cedar Rapids, IA 52402	*	Kent Electronics 8469 154th Avenue Redmond, WA 98052-2518	*
Kent Electronics 721 Landmeier Road Elk Grove Village, IL 60007-4757	*	Texas Components Corp. 1716 W. Sam Houston Parkway N. Houston, TX 77043	*
Kent Electronics 6316 College Boulevard Overland, KS 66211	*	T.T.I., Inc. 4625 S. Wandler Drive, Suite 108 Tempe, AZ 85282	*
Kent Electronics 19 Alpha Road Chelmsford, MA 01824	*	T.T.I., Inc. 1535 McCandless Dr., Bldg. 11 Milipitas, CA 95035	*
Kent Electronics 9104 Guilford Road, Suite 1010 Columbia, MD 21046	*	T.T.I., Inc. 15535 San Fernando Mission Blvd., Suite 319 Mission Hills, CA 91345	*
Kent Electronics 953 Westgate Drive St. Paul, MN 55114	*	T.T.I., Inc. 13220 Evening Creek Drive, S. Suite 101 San Diego, CA 92128	*
Kent Electronics 1135 Kildaire Farm Road, Suite 329-6 Cary, NC 27511	*		

MANUFACTURER: Vishay Resistive Systems Group (Continued)

T.T.I., Inc. 1570 Brookhollow, Suite 103 Santa Ana, CA 92705	*	T.T.I., Inc. 4700 Rockside Road, Suite 500 Independence, OH 44131	*
T.T.I., Inc. 6510 W. 91st Avenue, Suite 104 Westminster, CO 80030	*	T.T.I., Inc. 7185 S.W. Sandburg Road, Suite 202 Tigard, OR 97223	*
T.T.I., Inc. 8 Fairfield Boulevard Wallingford, CT 06492	*	T.T.I., Inc. 2441 Northeast Parkway Fort Worth, TX 76101-1896	*
T.T.I., Inc. 6220 South Orange Blossom Trail Suite 516 Orlando, FL 32809	*	T.T.I., Inc. 7539 Airport Freeway Fort Worth, TX 76118	*
T.T.I., Inc. 6410 Atlantic Boulevard, Suite 150 Norcross, GA 30071	*	T.T.I., Inc. 4033 E. Belknap Fort Worth, TX 76111-6696	*
T.T.I., Inc. 1301 Basswood, Suite 350 Schaumburg, IL 60173	*	T.T.I., Inc. 10849 Kinghurst Drive, Suite 135 Houston, TX 77099-3450	*
T.T.I., Inc. 9300 110 Street, Suite 645 Overland Park, KS 66210	*	T.T.I., Inc. 9577 N.E. 153rd Avenue Redmond, WA 98052	*
T.T.I., Inc. 2 Highwood Drive Tewksbury, MA 01876-1194	*	Tri-Start Electronics 277 Fairfield Road, Suite 122 Fairfield, NJ 07004	*
T.T.I., Inc. 6420-B Dobbin Road Columbia, MD 21045	*	Tri-Start Electronics 134 Remington Boulevard Ronkonkoma, NY 11779	*
T.T.I., Inc. 12301 Whitewater Drive, Suite 240 Minnetonka, MN 55343	*	Tri-Start Electronics 18 Broad Street, Suite 811 Charleston, SC 29401	*
T.T.I., Inc. 4805 Green's Dairy Road, Suite 120 Raleigh, NC 27604	*	Vishay Resistors 63 Lincoln Highway Malver, PA 19355-2120 (Category B)	*
T.T.I., Inc. 1 Executive Drive, Suite 9 Morrestown, NJ 08057	*		
T.T.I., Inc. 921 S. Second Street Ronkonkoma, NY 11779	*		
T.T.I., Inc. 6500 Poe Avenue, Suite 400 Dayton, OH 45414	*		