



QUALIFICATIONS VALIDATED
SEMIANNUALLY

QPL-55182-148
24 April 2002
SUPERSEDING
QPL-55182-147
5 October 2001

QUALIFIED PRODUCTS LIST
OF
PRODUCTS QUALIFIED UNDER PERFORMANCE SPECIFICATION
MIL-PRF-55182
RESISTORS, FIXED, FILM, NONESTABLISHED RELIABILITY,
ESTABLISHED RELIABILITY, AND SPACE LEVEL,
GENERAL SPECIFICATION FOR

This list has been prepared for use by or for the Government in the acquisition of products covered by Specification MIL-PRF-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>
Vishay Angstrohm	A
Vishay Dale	D
IRC (Boone)	R
IRC (Corpus Christi)	C

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, RNN50, RNR50* Chars. H, J, and K, res. values 10.0 ohms thru 0.301 megohm; res. tol. F, product levels C, M, P, R, and S.	TJ-50	55182-748-86	/7	IRC, Inc.
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	Vishay Dale
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)	Vishay Dale
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, product levels C, M, P, R and S.	TH-55 TJ-55 TK-55	55182-1226-76	/1	IRC, Inc.
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	Vishay 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	Vishay 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	Vishay Dale
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)	Vishay Dale
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	Vishay Angstrohm
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; char. K, res. tols. D and F, product levels C, M, P, R and S.	TH-60 TJ-60 TK-60	55182-1227-76 55182-930-75	/3	IRC, Inc.
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	Vishay 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 HT60 HY60	55182-425-89	/3	Vishay Angstrohm

GOVERNMENT DESIGNATION	MANUFACTURER'S DESIGNATION OR TYPE NUMBER	TEST OR QUALIFICATION REFERENCE	DETAIL SPECIFI- CATION	MANUFACTURER'S NAME (ADDRESS ON LAST PAGE)
PART I				
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	Vishay Dale
RNN65, RNR65* 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.	HN65 HS65 HT65 HY65	55182-595-76 55182-425-89	/5	Vishay 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 4.999 megohms, res. tol. F, life failure rates M and P.	HDN65	55182-124-96	/5	Vishay 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	Vishay Dale
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	Vishay 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	Vishay 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	Vishay Dale
RNN75, RNR75* Chars. E and J, res. values 49.9 ohms thru 1.21 megohms, res. tols. B, D, and F; life failure rate M.	HDN75	55182-033-98	/10	Vishay Angstrohm
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. V, T, A, B, D, and F; 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 Intertechnology, Inc. (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. V, T, A, B, D, and F; 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 Intertechnology, Inc. (1)
RNC90* Char. Y, res. values 50.0 kohms thru 0.121 megohm, res. tols. V, T, A, B, D, F; 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 Intertechnology, Inc. (1)

GOVERNMENT DESIGNATION	MANUFACTURER'S DESIGNATION OR TYPE NUMBER	TEST OR QUALIFICATION REFERENCE	DETAIL SPECIFI- CATION	MANUFACTURER'S NAME (ADDRESS ON LAST PAGE)
---------------------------	---	---------------------------------------	------------------------------	---

PART I

RNC90* Char Y, res. values 4.99 ohms thru 16.0 ohms, res. tols. B, D, and F; life failure rates M, P, and R.	S555	55182-152-97 55182-001-99	/9	Vishay Intertechnology, Inc. (2)
RNC90* Char. Y, res. values 16.2 ohms thru 30.0 ohms, res. tols. A, B, D, and F; life failure rates M, P, and R.	S555	55182-145-94 55182-001-99 55182-119-99	/9	Vishay Intertechnology, Inc. (2)
RNC90* Char. Y, res. values 30.1 ohms thru 121k ohms, res. tols. V, T, A, B, D, and F; life failure rates M, P, and R.	S555	55182-066-96 55182-152-97 55182-002-99	/9	Vishay Intertechnology, Inc. (2)
RNC90* Char Z, res. values 100 ohms thru 50.1k ohms, res. tols. A, B, D, F, and T; life failure rates M, P and R.	Z555	55182-052-01	/9	Vishay Intertechnology, Inc. (2)
RNC90* Char. Y, res. values 100 ohms thru 121k ohms res. tols. A, B, D, F, and T; life failure rates M, P, and R.	MAQ	55182-154-98 55182-155-98	/9	Wilbrecht Electronics, Inc.

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
IRC, Inc. International Resistive Company P.O. Box 1860 Boone, NC 28607 Plant: 736 Greenway Road Boone, NC 28607	11502
Vishay Angstrohm 18400 Precision Place Hagerstown, MD 21742 Plant: Same Address	17745
Vishay Dale 1122 23rd Street P.O. Box 609 Columbus, NE 68601 Plants: 2300 Riverside Blvd. Norfolk, NE	91637
Vishay Intertechnology, Inc. 63 Lincoln Highway Malvern, PA 19355 Plants: 1. Same Address 2. Vishay Israel, Ltd. 2 Ha'ofan Street Holon 58125, Israel	18612
Wilbrecht Electronics, Inc. 1400 Energy Park Drive, Suite 18 St. Paul, MN 55108-5248 Plant: 155 Waibel Drive N.E. Huron, SD 57530	1FDC3 OKUU5

AUTHORIZED ER DISTRIBUTORS: (Category A unless otherwise specified)

MANUFACTURER: IRC, Inc. IRC, Inc.
Greenway Road 4222 South Staples Street
Boone, NC 28607 Corpus Christi, TX 78411

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

Arrow Zeus *

3254 Fraser Street
Aurora, CO 80011

Future Electronics
41 Main Street
Bolton, MA 01740

Jaco Electronics *

2822 Townsgate Road
Westlake Village, CA 91361

Jaco Electronics *

145 Oser Avenue
Hauppauge, L.I., NY 11787

Justin Electronics *

3300 highway 421 North
Wilmington, NC 28402 (Category B)

Lauralekx, Inc.
1202 Tech Boulevard
Suite 108
Tampa, FL 33619

Marsh Electronics *

1563 South 101st Street
Milwaukee, WI 53214

Neumann Electronics
8665 Miralani Drive
San diego, CA 92126

New Yorker Electronics *

420 Center Avenue
Mamaroneck, NY 10543

Newark Electronics
4801 N. Ravenswood
Chicago, IL 60640

Newark Electronics
217 Wilcox Avenue
Gaffney, SC 29340

Spirit Electronics *

7819 East Greenway, Suite 9
Scottsdale, AZ 85269

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

AUTHORIZED ER DISTRIBUTORS: (Category A unless otherwise specified)

MANUFACTURER: Vishay Angstrom
 18400 Precision Place
 Hagerstown, MD 21742

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

Arrow/Richey Electronics 50 Horseblock Road Brookhaven, NY 11719		Jaco Electronics 2102 Tech Boulevard Tampa, FL 33519	*
Avnet EMG 60 S. McKemy Avenue Chandler, AZ 85226		Jaco Electronics 1053 East Street Tewksbury, MA 01876	
C & D Electronics 3010 W. Gandy Blvd., Suite 12 Tampa, FL 33611	*	Jaco Electronics 10270-F Old Columbia Road Columbia, MD 21046	
C & D Electronics 90 Carando Drive Springfield, MA 01104	*	Jaco Electronics 3029-107 Stonybrook Drive Raleigh, NC 27604	
Command Electronics 42 Central Drive Farmingdale, L.I., NY 11735	*	Jaco Electronics 145 Oser Avenue Hauppauge, L.I., NY 11787	
Eastern States Components, Inc. 108 Pretts Junction Road Sterling, MA 01564		Jaco Electronics 3247 Kellway Circle Addison, TX 75224	*
Future Electronics 237 Hymus Boulevard Pointe Claire, Quebec, H9R 5C7 Canada		Kent Electronics, Inc. 549 S. 48th Street, Suite 104 Tempe, AZ 85281	*
G & A Sales P.O. Box 39398 2854 Blue Rock Road Cincinnati, OH 45239	*	Kent Electronics, Inc. 9760 Owensmouth Avenue Chatsworth, CA 91311	*
Jaco Electronics 23-441 South Point Drive, Suite 140 Laguna Hills, CA 92653	*	Kent Electronics, Inc. 6195 Cornerstone Court East San Diego, CA 92121	*
Jaco Electronics 2880 Zanker Road Suite 202 San Jose, CA 95134	*	Kent Electronics, Inc. 1520 Montague Expressway San Jose, CA 95131	*
Jaco Electronics 2260 Townsgate Road Westlake Village, CA 91361	*	Kent Electronics, Inc. 1500 West Hampden, Bldg. 4 Englewood, CO 80110	*
Jaco Electronics 384 Pratt Street Meriden, CT 06450	*	Kent Electronics, Inc. 9280 Bay Plaza Boulevard Tampa, FL 33619-9627	*
Jaco Electronics 1060 Holland Drive Boca Raton, FL 33487	*	Kent Electronics, Inc. 5300 N. Park Place, N.E., Suite 110 Cedar Rapids, IA 52402	*

MANUFACTURER: Vishay Angstrom (Continued)

Kent Electronics, Inc. 2190 N. Gladstone Court Glendale Heights, IL 60139	*	Petell/Passive Components, Inc. 21113 Superior Street Chatsworth, CA 91311	*
Kent Electronics, Inc. 21 Alpha Road Chelmsford, MA 01824		Passive Components, Inc. 1590 Oakland Road San Jose, CA 95131	*
Kent Electronics, Inc. 2515 Wabash Avenue St. Paul, MN 55114 (Category B)		RESCO/Baltimore 4961 Mercantile Road Baltimore, MD 21236	
Kent Electronics, Inc. 5494 Brown Road Hazelwood, MO 63042	*	RESCO/Washington 10523 Ewing Road Beltsville, MD 20705	*
Kent Electronics, Inc. 3121-B South Dodgion Independence, MO 64055	*	Texas Components Corp. 1716 W. Sam Houston Parkway Houston, TX 77043	*
Kent Electronics, Inc. 1727 North Ocean Avenue Medford, NY 11763	*	T.T.I., Inc. 4625 S. Wendler Drive, Suite 108 Tempe, AZ 85282	*
Kent Electronics 1400 Gillingham Lane Houston, TX 77478		T.T.I., Inc. 1535 McCandless Dr., Bldg. 11 Milipitas, CA 95035	*
Kent Electronics, Inc. 15209 N.E. 95th Redmond, WA 98052	*	T.T.I., Inc. 10200 Sepulveda Blvd., Suite 380 Mission Hills, CA 91345	*
L & S Electronics 139 N. Central Avenue Valley Stream, NY 11580	*	T.T.I., Inc. 13220 Evening Creek Drive, S. San Diego, CA 92128	*
L & S Electronics 21 Burns Lane Charleston, SC 29481	*	T.T.I., Inc. 1570 Brookhollow, Suite 103 Santa Ana, CA 92705	*
MMG Electronics/L & S 8831 49th Street N. Pinellas Park, FL 34665	*	T.T.I., Inc. 6800 N. Broadway, Suite 107 Denver, CO 80221	*
Mast Distributors, Inc. 710 Union Parkway Ronkonkoma, NY 11779	*	T.T.I., Inc. 8 Fairfield Boulevard Wallingford, CT 06492	*
Micro Mil Division 446 Windsor Park Drive Dayton, OH 45459	*	T.T.I., Inc. 6220 South Orange Blossom Trail Suite 516 Orlando, FL 32809	*
New Yorker Electronics Co., Inc. 420 Center Avenue Mamaroneck, NY 10543		T.T.I., Inc. 2979-A Pacific Drive Norcross, GA 30071	*

MANUFACTURER: Vishay Angstrom (Continued)

T.T.I., Inc. *
100 Research Drive
Wilmington, MA 01887

T.T.I., Inc. *
6420 Dobbin Road
Columbia, MD 21045

T.T.I., Inc. *
12301 Whitewater Drive
Minnetonka, MN 55343

T.T.I., Inc. *
5500-77 Center Drive
Charlotte, NC 28217

T.T.I., Inc. *
100 Century Parkway, Suite 120
Mt. Laurel, NJ 08054

T.T.I., Inc. *
921 South Second Street
Ronkonkoma, NY 11779

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

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

Vishay Dale
2300 Riverside Boulevard
Norfolk, NE 68701
(NOTE: Category B)

AUTHORIZED ER DISTRIBUTORS: Category A (unless otherwise specified)

MANUFACTURER: Vishay Angstrom
One Precision Place
Hagerstown, MD 21740

DISTRIBUTOR: Vishay Dale
P.O. Box 609
Columbus, NE 68601

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

Acacia/Deanco Electronics
16592 Milliken Avenue
Irvine, CA 92714

Pioneer/Standard
4800 East 131st. Street
Cleveland, OH 44105

Acacia/Deanco Electronics
1288 Hammerwood Avenue
Sunnyvale, CA 94086

Pioneer/Standard
P.O. Box 291
Dayton, OH 45404

Bell Industries,
Electronic Distributor Division
515 Busse Road
Elk Grove Village, IL 60007

Resco/Baltimore
4961 Mercantile Road
Baltimore, MD 21236

Command Electronics Corp.
42 Central Dr.
Farmingdale, NY 11725

Stotts-Friedman Company, Inc.
2600 East River Road
Dayton, OH 45439

Dee Electronics
2500 16th Avenue, SW.
Cedar Rapids, IA 52406

Summit Distributors
916 Main Street
Buffalo, NY 14202

Fairmont Electronic Sales Corp.
295 Oser Avenue
Hauppauge, NY 11787

T. T. I., Inc.
10200 Sepulveda Boulevard
Mission Hills, CA 91345

Hamilton/Avnet
620 North Industry Drive
Oxford, NC 27565

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

Kent Electronics, Inc.
9760 Owensmouth Avenue
Chatsworth, CA 91311

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

Kent Electronics, Inc.
4040 Sorrento Valley Road
San Diego, CA 92121

T. T. I., Inc.
4033 East Belknap
Fort Worth, TX 76111

Kent Electronics, Inc.
1520 Montague Expressway
San Jose, CA 95131

Waco Electronics
4900 Monaco Parkway
Commerce City, CO 80022

Kent Electronics, Inc.
2515 Wabash Avenue
St. Paul, MN 55114

L & S Electronics Inc.
139 North Central Avenue
Valley Stream, L.I., NY 11580

Mayer Electronics Company
34 Linnell Circle
Billerica, MA 01821

AUTHORIZED ER DISTRIBUTORS: (Category A unless otherwise specified)

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

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

Arrow Electronics/PEMCO Group
2900 Westchester Avenue, Suite 401
Purchase, NY 10577-2508

Avnet EMG
60 S. McKemy
Chandler, AZ 85226

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

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

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

Pioneer Standard Electronics
4800 E. 131 Street
Cleveland, OH 45105

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: Vishay Intertechnology, Inc.
 63 Lincoln Highway
 Malvern, PA 19355

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

Arrow Electronics 50 Horseblock Road Brookhaven, NY 11719		Bell Industries 3000-D Business Park Drive Norcross, GA 30071	*
Avnet EMG 60 S. McKemy Avenue Chandler, AZ 85226		Bell Industries 870 Cambridge Elk Grove Village, IL 60007-2437	*
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 Fairoaks 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	*

MANUFACTURER: Vishay Intertechnology, Inc. (Continued)

Bell Industries 1715 114th Avenue, S.E., Suite 208 Bellevue, WA 98004	*	Hamilton Hallmark 125 Commerce Court, Unit 6 Cheshire, CT 06410	*
Eastern States Components 108 Pretts Junction Road Sterling, MA 01564		Hamilton Hallmark 3350 N.W. 53rd Street, Suites 105-107 Ft. Lauderdale, FL 33309	*
Future Electronics 237 Hymus Boulevard Pointe Claire, Quebec, H9R 5C7 Canada		Hamilton Hallmark 10491 72nd Street, N. Largo, FL 34647	*
Hamilton Hallmark 4890 University Drive, Suite 1 Huntsville, AL 35805-6229	*	Hamilton Hallmark 7079 University Boulevard Winter Park, FL 32792	*
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	*

MANUFACTURER: Vishay Intertechnology, Inc. (Continued)

Hamilton Hallmark 1 Keystone Avenue, Bldg. 36 Cherry Hill, NJ 08003	*	Hamilton Hallmark 1100 E. 6600 S., Suite 120 Salt Lake City, UT 84121	*
Hamilton Hallmark 10 Lanidex Plaza West Parsippany, NJ 07054-2715	*	Hamilton Hallmark 8214 154th Avenue, N.E. Redmond, WA 98052-3556	*
Hamilton Hallmark 7801 Academy Road, Bldg. 1, Suite 102 Albuquerque, NM 87109	*	Hamilton Hallmark 2440 S. 179th Street New Berlin, WI 53146	*
Hamilton Hallmark 390 Rabro Drive Hauppauge, NY 11788	*	Jaco Electronics 1610-A Berryessa Road San Jose, CA 95134	*
Hamilton Hallmark 1057 Henrietta Road Rochester, NY 14623	*	Jaco Electronics 1541-A Parkway Loop Tustin, CA 92680	*
Hamilton Hallmark 7760 Washington Village Drive Dayton, OH 45459	*	Jaco Electronics 2282 Townsgate Road, Suite 100 Westlake, CA 91316	*
Hamilton Hallmark 5821 Harper Road Solon, OH 44139	*	Jaco Electronics P.O. Box 471 Erie, CO 80516	*
Hamilton Hallmark 777-L Dearborn Park Lane Worthington, OH 43085	*	Jaco Electronics 9900 West Sample Road, Suite 404 Coral Springs, FL 33065	*
Hamilton Hallmark 12606 E. 51st Street Tulsa, OK 74147	*	Jaco Electronics 593 Learning Court Lawrenceville, GA 30244	*
Hamilton Hallmark 9750 S.W. Nimbus Avenue Beaverton, OR 97005-7132	*	Jaco Electronics, Inc. 1053 East Street Tewksbury, MA 10876	*
Hamilton Hallmark 12211 Technology Boulevard Austin, TX 78759	*	Jaco Electronics 10270-F Old Columbia Road Columbia, MD 21046	*
Hamilton Hallmark 11420 Pagemill Drive Dallas, TX 75243	*	Jaco Electronics 10340 Viking Drive, Suite 115 Eden Prairie, MN 55344	*
Hamilton Hallmark 11-A Founders Boulevard El Paso, TX 79906	*	Jaco Electronics 5206 Green's Dairy Road Raleigh, NC 27604-4612	*
Hamilton Hallmark 1406 N. 28th Street, Suite 105 Harlingen, TX 78550	*	Jaco Electronics 145 Oser Avenue Hauppauge, NY 11787	*
Hamilton Hallmark 8000 Westglen Houston, TX 77063	*	Jaco Electronics 4900 S.W. Griffith Drive, Suite 129 Beaverton, OR 97005	*

MANUFACTURER: Vishay Intertechnology, Inc. (Continued)

Jaco Electronics 2120-A Braker Lane Austin, TX 78758	*	Kent Electronics 953 Westgate Drive St. Paul, MN 55114	*
Jaco Electronics 1209 N. Glenville Richardson, TX 75081	*	Kent Electronics 1135 Kildaire Farm Road, Suite 329-6 Cary, NC 27511	*
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 1400 Gillingham Lane Houston, TX 77478	*
Kent Electronics 6355 Metrowest Blvd., Suite 240 Orlando, FL 32835	*	Kent Electronics 7433 Harwin Drive Houston, TX 77036-2015	*
Kent Electronics 5340 N. Park Place, N.E. Suite 110 Cedar Rapids, IA 52402	*	Kent Electronics 1360 Presidential Drive, Suite 170 Richardson, TX 75081-2437	*
Kent Electronics 721 Landmeier Road Elk Grove Village, IL 60007-4757	*	Kent Electronics 8469 154th Avenue Redmond, WA 98052-2518	*
Kent Electronics 6316 College Boulevard Overland, KS 66211	*	Texas Components Corp. 1716 W. Sam Houston Parkway N. Houston, TX 77043	*
Kent Electronics 19 Alpha Road Chelmsford, MA 01824	*	T.T.I., Inc. 4625 S. Wandler Drive, Suite 108 Tempe, AZ 85282	*
Kent Electronics 9104 Guilford Road, Suite 1010 Columbia, MD 21046	*	T.T.I., Inc. 1535 McCandless Dr., Bldg. 11 Milipitas, CA 95035	*

MANUFACTURER: Vishay Intertechnology, Inc. (Continued)

T.T.I., Inc. 15535 San Fernando Mission Blvd., Suite 319 Mission Hills, CA 91345	*	T.T.I., Inc. 921 S. Second Street Ronkonkoma, NY 11779	*
T.T.I., Inc. 13220 Evening Creek Drive, S. Suite 101 San Diego, CA 92128	*	T.T.I., Inc. 6500 Poe Avenue, Suite 400 Dayton, OH 45414	*
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	*		