REVISIONS			
LTR	**DESCRIPTION**	**DATE**	**APPROVED**
A	Delete vendor CAGE number 17826. Delete vendor similar part numbers 671-XX and AT-061671-XX. Editorial changes throughout	16 Feb 88	D. MOORE
B	Changes in accordance with NOR 5905-R010-92	28 May 93	D. MOORE
C	Update and validation of drawing. update to present DoD policy requirements	24 Aug 00	K. COTTONGIM
D	Added Pure Tin Prohibition, Pulse Application, Electrostatic Charge and Manufacturer Eligibility paragraphs Editorial changes throughout	30 June 11	M. RADECKI

CURRENT DESIGN ACTIVITY CAGE CODE 037Z3
HAS CHANGED NAMES TO:
DLA LAND AND MARITIME
COLUMBUS, OHIO 43218-3990

Prepared in accordance with ASME Y14.100

Source control drawing

REV STATUS OF PAGES																		
	REV	D	D	D	D	D	D	D										
	PAGES	1	2	3	4	5	6	7										

PMIC N/A Original date of drawing 14 July 1987	**PREPARED BY** Allen R. Knox	**DEFENSE ELECTRONICS SUPPLY CENTER** **DAYTON, OH 45444-5000**
	CHECKED BY David E. Moore	**TITLE** RESISTOR, NETWORK, 6 PIN, SINGLE-IN-LINE PACKAGE (SIP)
	APPROVED BY David E. Moore	
	SIZE A / **CODE IDENT. NO.** 14933	**DWG NO.** 87030
	REV D	**PAGE** 1 **OF** 7

1. SCOPE

1.1 Scope. This drawing describes the requirements for a 6 pin, single-in-line package (SIP), resistor network.

1.2 Part or Identifying Number (PIN). The complete PIN is as follows:

87030	-	001
Drawing number		Schematic

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications, standards and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the cited in the solicitation or contract (see 6.2).

DEPARTMENT OF DEFENSE SPECIFICATION

MIL-PRF-83401 - Resistors Networks, Fixed, Film, and Capacitor-Resistor Networks, Ceramic Capacitor and Fixed Film Resistors, General Specification For.

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-1285 - Marking of Electrical and Electronic Parts.

(Copies of these documents are available online at https://assist.daps.dla.mil/quicksearch/ or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094).

2.2 Order of precedence. Unless otherwise noted herein or in the event of a conflict between the text of this document and the references cited herein (except for related specification sheets), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

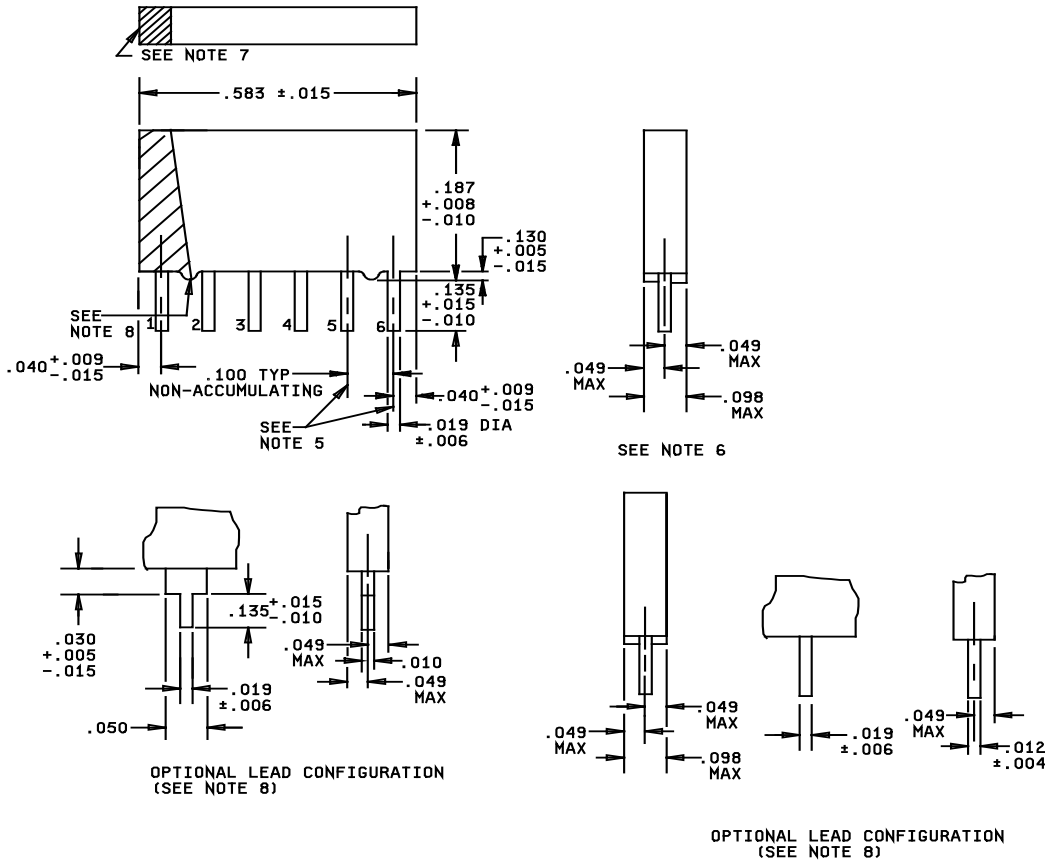
3.1 Item requirements. The individual item requirements shall be in accordance with MIL-PRF-83401 and as specified herein.

3.2 Interface and physical dimensions. The resistor shall meet the interface and physical dimensions as specified in MIL-PRF-83401 and herein (see figure 1).

3.3 Electrical characteristics.

3.3.1 Resistance. The resistance range shall be as specified on figure 2.

3.3.2 Resistance tolerance. The resistance tolerance shall be ±1 percent.



Inches	mm	Inches	mm	Inches	mm	Inches	mm
.004	0.10	.010	0.25	.030	0.76	.100	2.54
.005	0.13	.012	0.30	.040	1.02	.135	3.43
.006	0.15	.015	0.38	.049	1.24	.187	4.75
.008	0.20	.017	0.43	.050	1.27	.583	14.81
.009	0.23	.019	0.48	.098	2.49		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ±.005 (0.13 mm).
4. The picturization of the styles above is given as representative of the envelope of the item. Slight deviations from the outline shown, which are contained within the envelope and do not alter the functional aspects of the device, are acceptable.
5. Terminal centerline to centerline measurements made at point of emergence of the lead from the body.
6. Measurement made at point of emergence of the lead from the body.
7. Pin 1 locator shall be a bevel, stripe, notch or a dot above pin number 1 in the shaded area.
8. If the standoffs are located on the body, a minimum of two standoffs are required as illustrated. As an option, additional standoffs maybe located on the body of the resistor network. If leads with standoffs are used, standoffs on the body are not required.

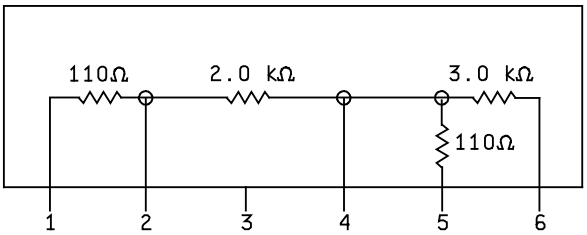
FIGURE 1. Resistor network.

3.3.3 Resistor power rating. The resistor power rating for individual resistors shall be 100 milliwatts.

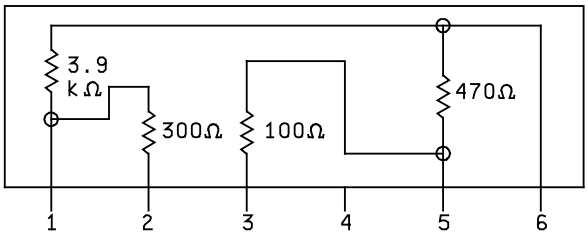
3.3.4 Package power rating. The package power rating shall be 250 milliwatts.

3.3.5 Schematic. Resistor networks are available in schematics listed in figure 2.

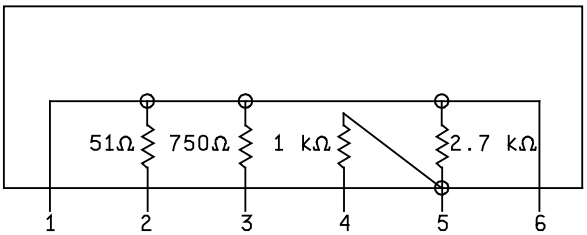
SCHEMATIC 001



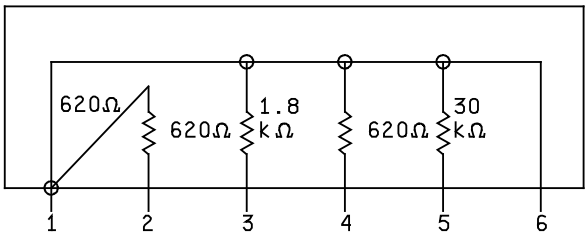
SCHEMATIC 004



SCHEMATIC 002



SCHEMATIC 005



SCHEMATIC 003

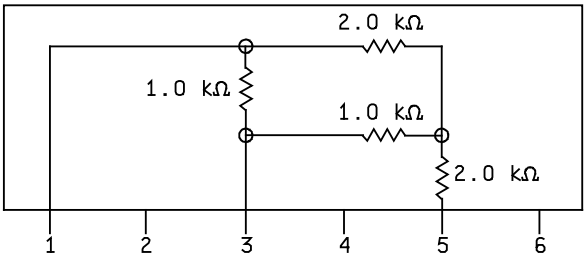


FIGURE 2. Schematics.

3.3.6 Voltage rating. Each resistor element shall have a maximum voltage rating of 50 volts dc and ac rms.

3.3.7 Characteristic. The resistor networks shall be in accordance with MIL-PRF-83401, characteristic K.

3.3.8 Pure tin. The use of pure tin, as an underplate or final finish, is prohibited both internally and externally. Tin content of resistor components and solder shall not exceed 97 percent, by mass. Tin shall be alloyed with a minimum of 3 percent lead, by mass (see 6.3).

3.4 Environmental characteristic. The environmental characteristics shall be in accordance with MIL-PRF-83401.

3.5 Marking. Marking shall be in accordance with MIL-STD-1285, except the PIN shall be as specified in 1.2, with the manufacturer's CAGE number or trade mark and date code.

3.6 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

3.7 Manufacturer eligibility. To be eligible for listing as a approved source of supply, a manufacturer shall be listed on the MIL-PRF-83401 Qualified Products List for at least one part, or perform the group A and group B inspections specified herein on a sample of parts agreed upon by the manufacturer and DLA Land and Maritime - VAT.

3.7.1 Certificate of compliance. A certificate of compliance shall be required from manufacturers requesting to be listed as approved sources of supply.

3.8 Workmanship. Resistors shall be uniform in quality and free from any defects that will affect life, serviceability, or appearance.

4. VERIFICATION

4.1 Product assurance program. The product assurance program specified in MIL-PRF-83401.

4.2 Qualification inspection. Qualification inspection is not applicable to this document.

4.3 Conformance inspections.

4.3.1 Inspection of product for delivery. Inspection of product for delivery shall consist of group A and group B inspections of MIL-PRF-83401.

4.3.2 Certification. The acquiring activity, at its discretion, may accept a certificate of compliance with group B requirements in lieu of performing group B tests (see 6.2d).

4.4 Inspection of packaging. Inspection of packaging shall be in accordance with MIL-PRF-83401.

4.5 Visual and mechanical examination. Resistors shall be examined to verify that the materials, design, construction, physical dimensions, marking, and workmanship are in accordance with the applicable requirements of MIL-PRF-83401.

5. PACKAGING

5.1 Packaging. For acquisition purpose, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military services system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. Resistor networks are used in surface mounting applications where space is a major concern.

6.2 Ordering data. The contract or purchase order should specify the following:

a. Complete PIN (see 1.2).

b. Requirements for delivery: One copy of the conformance inspection data or a certificate of compliance that parts have passed conformance inspection with each shipment of parts by the manufacturer.

c. Packaging requirements (see 5.1).

d. Whether the manufacturer performs the group B tests or provides certificate of compliance with group B (see 4.3.2).

6.3 Tin whisker growth. The use of alloys with tin content greater than 97 percent, by mass, may exhibit tin whisker growth problems after manufacture. Tin whiskers may occur anytime from a day to years after manufacture and can develop under typical operating conditions, on products that use such materials. Conformal coatings applied over top of a whisker-prone surface will not prevent the formation of tin whiskers. Alloys of 3 percent lead, by mass, have shown to inhibit the growth of tin whiskers. For additional information on this matter, refer to ASTM-B545 (Standard Specification for Electrodeposited Coatings of Tin).

6.4 Pulse applications. Designers are CAUTIONED on using the above resistors in high power pulse applications. Since they have not been qualified nor tested for such applications, damage and premature failure are possible

6.5 Electrostatic charge. Under several combinations of conditions, these resistors can be electrically damaged, by electrostatic charges, and drift from specified value. Users should consider this phenomena when ordering or shipping resistors. Direct shipment to the Government is controlled by MIL-DTL-39032 that specifies a preventive packaging procedure.

6.6 Users of record. Coordination of this document for future revisions is coordinated only with the approved sources of supply and the users of record of this document. Requests to be added as a recorded user of this drawing may be achieved on-line at resistor@dla.mil or in writing to: DLA Land and Maritime ATTN: VAT, P.O. Box 3990, Columbus, OH 43218-3990 or by telephone (614) 692-8754 or DSN 850-8754.

6.7 Approved sources of supply. Approved sources of supply are listed herein. Additional sources will be added as they become DLA Land and Maritime ATTN: VAT, P.O. Box 3990, Columbus, OH 43218-3990, or by telephone (614) 692-8754 or DSN 850-8754.

DLA Land and Maritime drawing PIN	Vendor similar designation or type number 1/	Vendor CAGE	Vendor's name and address
87030-***	4***	57027	IRC Inc. 4222 South Staple Street Corpus Christy, TX 78411
87030-***	MSP06A-**-***	91637	Vishay-Dale P.O. Box 609 1122 23rd Street Columbus, NE 68602-0609

1/ Parts must be purchased to the DLA Land and Maritime PIN to assure that all performance requirements and test are met.