

3. REQUIREMENTS

3.1 Item requirements. The individual item requirements shall be in accordance with MIL-PRF-914 and as specified herein.

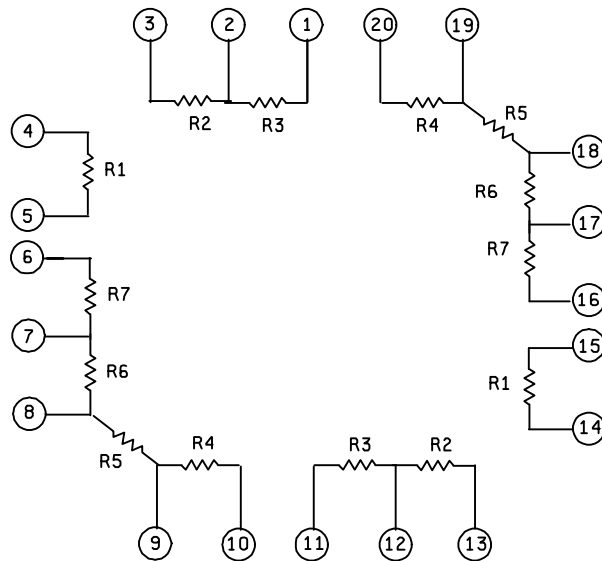
3.2 Interface and physical dimension requirements. Resistors shall meet the interface and physical dimensions as specified in MIL-PRF-914 and herein (see figure 2). Cavity construction using wire bonding techniques shall be supplied only as a characteristic C hermetically sealed resistor network.

3.2.1 Design documentation. The design documentation shall be in accordance with MIL-PRF-914 and, unless otherwise specified in the contract or purchase order, shall be retained by the manufacturer but available for review by the acquiring activity or contractor upon request.

3.2.2 Termination. Termination finish shall be tin-lead or hot solder dip as specified in MIL-PRF-914

3.3 Electrical characteristic.

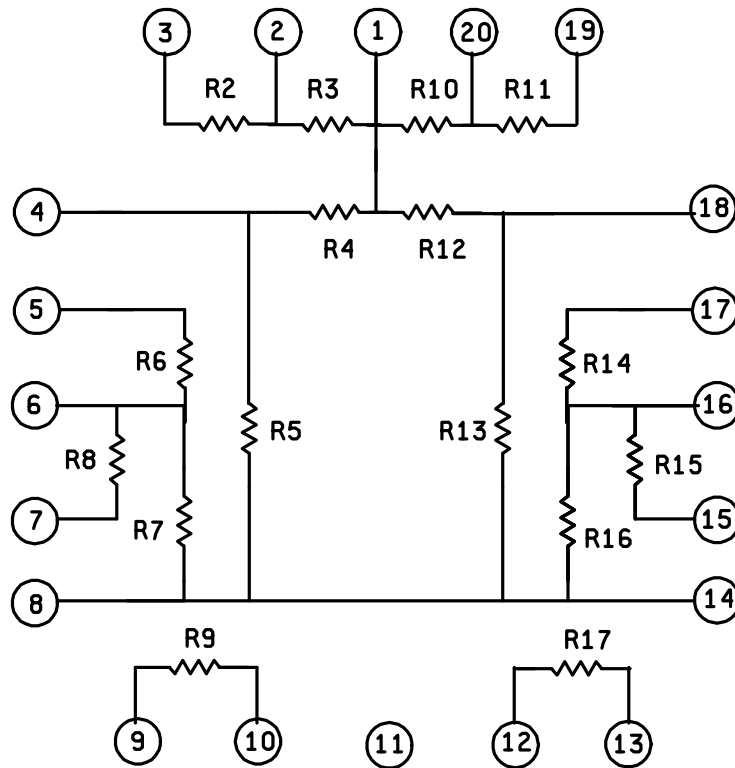
3.3.1 Resistance tolerance. Resistors are available in tolerances specified on figure 1.



Dash number	Resistor number	Resistance value (ohms)	Resistance tolerance (\pm percent) ($\pm 25^\circ\text{C}$)	Power rating (milliwatts)
-01	R1	261	2	71
	R2	1.1 k	2	71
	R3	820	2	71
	R4	8.8 k	2	71
	R5	93.1	2	71
	R6	93.1	2	71
	R7	8.8 k	2	71

FIGURE 1. Schematics.

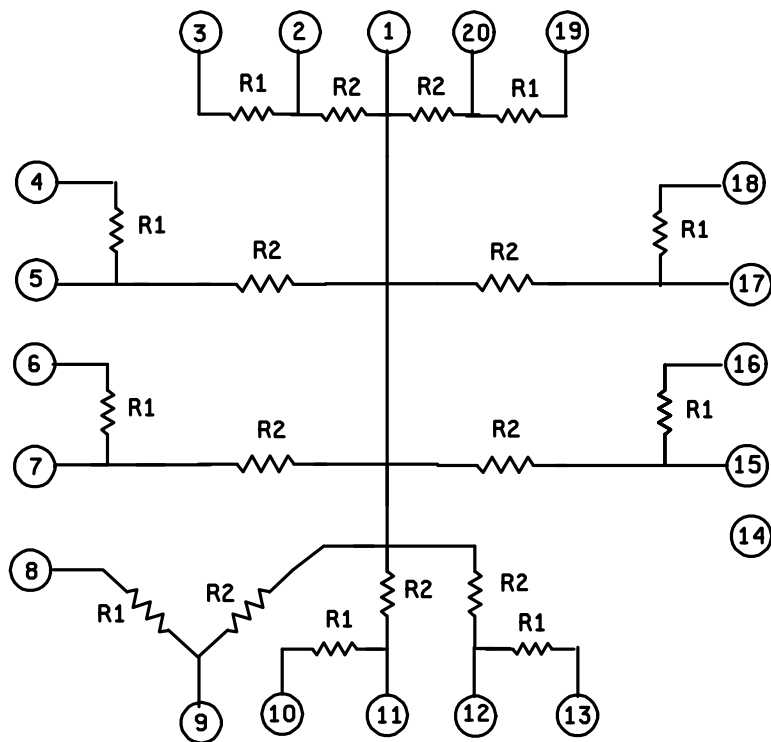
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Dash number	Resistor number	Resistance value (ohms)	Resistance tolerance (\pm percent) ($\pm 25^{\circ}\text{C}$)	Power rating (milliwatts)
-02	R2	42 k	5	58
	R3	30 k	5	58
	R4	20 k	0.1	58
	R5	9.24 k	0.1	58
	R6	20 k	0.1	58
	R7	10 k	0.1	58
	R8	133 k	0.1	58
	R9	4.7 k	5	58
	R10	30 k	5	58
	R11	42 k	5	58
	R12	20 k	0.1	58
	R13	9.24 k	0.1	58
	R14	20 k	0.1	58
	R15	133 k	0.1	58
	R16	10 k	0.1	58
	R17	4.7 k	5	58

FIGURE 1. Schematics - Continued.

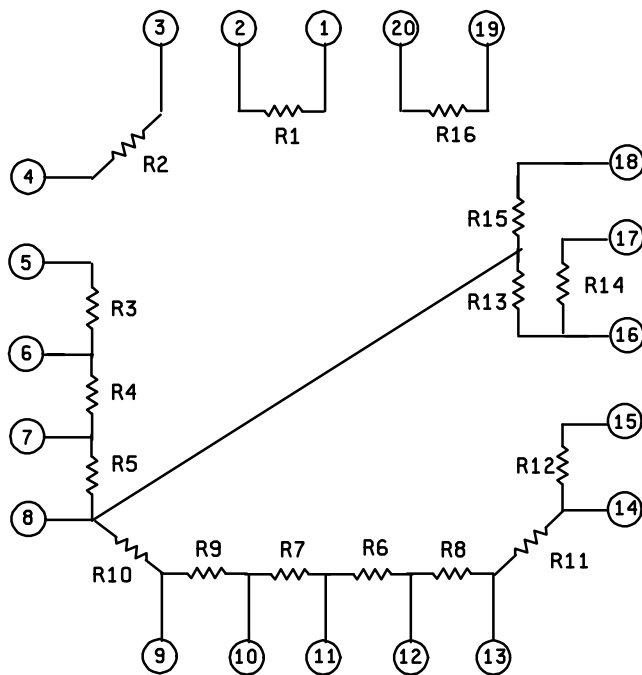
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Dash number	Resistor number	Resistance value (ohms)	Resistance tolerance (\pm percent) ($\pm 25^{\circ}\text{C}$)	Power rating (milliwatts)
-03	R1	40 k	5	55
	R2	10 k	5	55

FIGURE 1. Schematics - Continued.

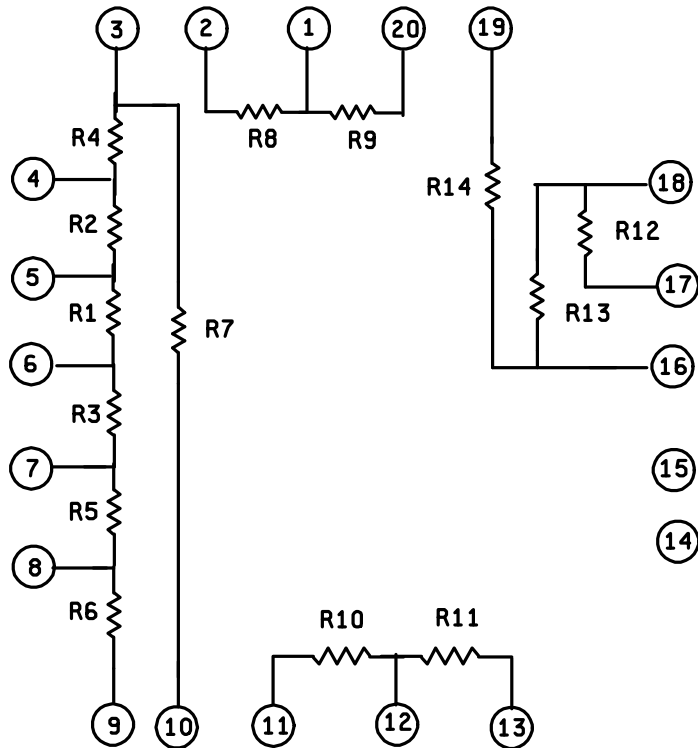
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Dash number	Resistor number	Resistance value (ohms)	Resistance tolerance (\pm percent) ($\pm 25^\circ\text{C}$)	Power rating (milliwatts)	Special requirements
-04	R1	2 k	2	100	$\frac{R4}{R3 R5} = .002 \pm .02\%$
	R2	2 k	1	25	
	R3	40 k	1	25	
	R4	160 k	1	25	
	R5	40 k	1	25	
	R6	4 k	1	25	$\frac{R7}{R6} = \frac{R8}{R6} = 25 \pm .02\%$
	R7	100 k	1	25	
	R8	100 k	1	25	
	R9	20 k	1	25	$\frac{R12}{R11} = \frac{R10}{R9} = 6.209 \pm .02\%$
	R10	124.179 k	1	25	
	R11	20 k	1	25	$\frac{R14}{R13} = .01 \pm .02\%$
	R12	124.179	1	25	
	R13	1 M	1	100	
	R14	10 k	1	50	
	R15	100 k	2	25	
	R16	2 k	2	100	

FIGURE 1. Schematics - Continued.

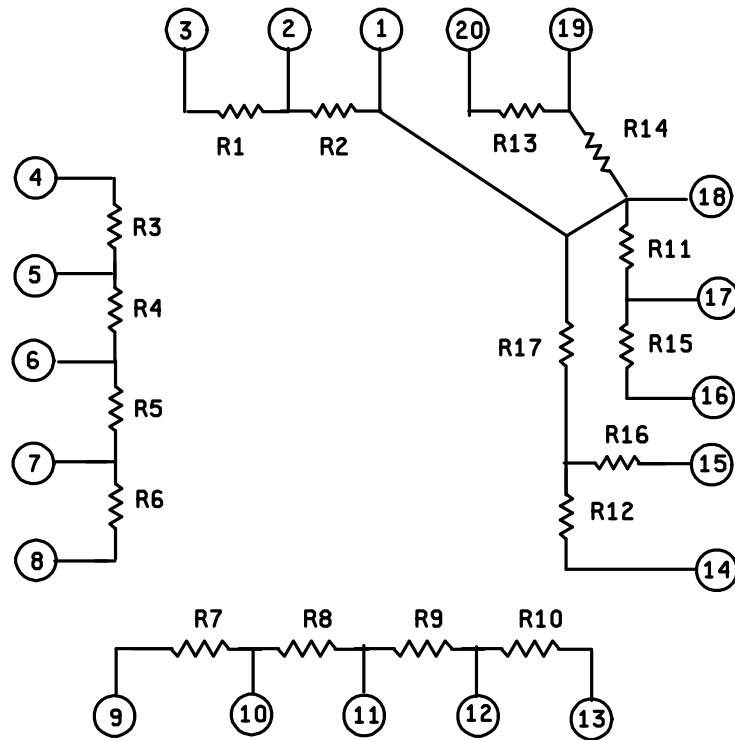
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Dash number	Resistor number	Resistance value (ohms)	Resistance tolerance (± percent) (±25°C)	Power rating (milliwatts)	Special requirements
-05	R1	235.29	1	25	$\frac{R2}{R1} = \frac{R3}{R1} = 85.0014875 \pm .02\%$
	R2	20 k	1	25	
	R3	20 k	1	25	
	R4	20 k	1	25	$\frac{R6}{R5} = \frac{R7}{R4} = 1 \pm .02\%$
	R5	20 k	1	25	
	R6	20 k	1	25	
	R7	20 k	1	25	$\frac{R9}{R8} = .17068 \pm .02\%$
	R8	10 k	1	25	
	R9	1.7068 k	1	25	
	R10	100 k	1	25	
	R11	2 k	1	100	
	R12	2 k	1	100	
	R13	100 k	1	25	
	R14	100 k	1	25	

FIGURE 1. Schematics - Continued.

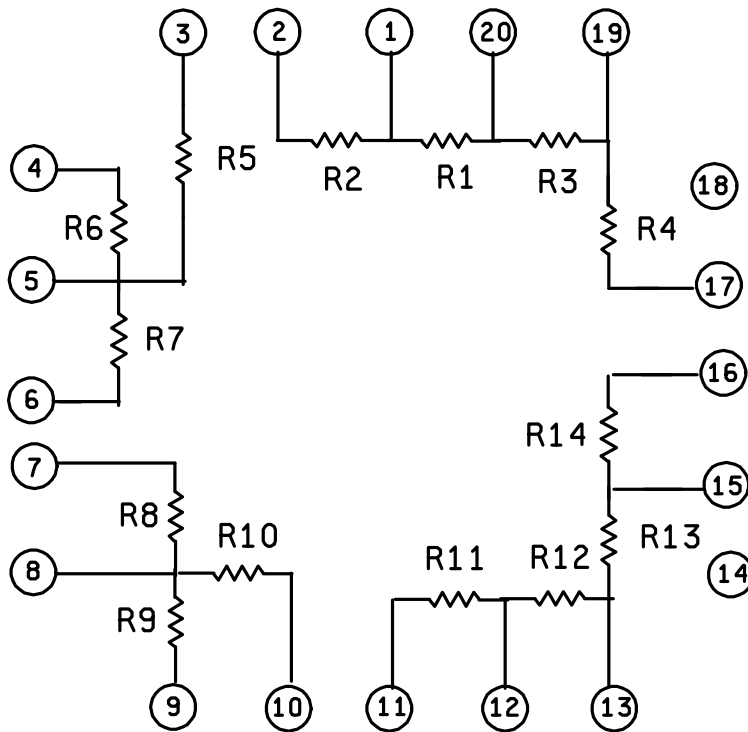
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Dash number	Resistor number	Resistance value (ohms)	Resistance tolerance (\pm percent) ($\pm 25^{\circ}\text{C}$)	Power rating (milliwatts)
-06	R1	10 k	.01	58
	R2	240 k	.01	58
	R3	2 k	.01	58
	R4	2 k	.01	58
	R5	48 k	.01	58
	R6	10 k	2	58
	R7	16 k	.01	58
	R8	10 k	.01	58
	R9	18.83 k	.01	58
	R10	10 k	.01	58
	R11	1 k	.01	58
	R12	49.9 k	.1	58
	R13	39 k	.01	58
	R14	10 k	.01	58
	R15	2.5 k	2	58
	R16	100 k	.1	58
	R17	374	.1	58

FIGURE 1. Schematics - Continued.

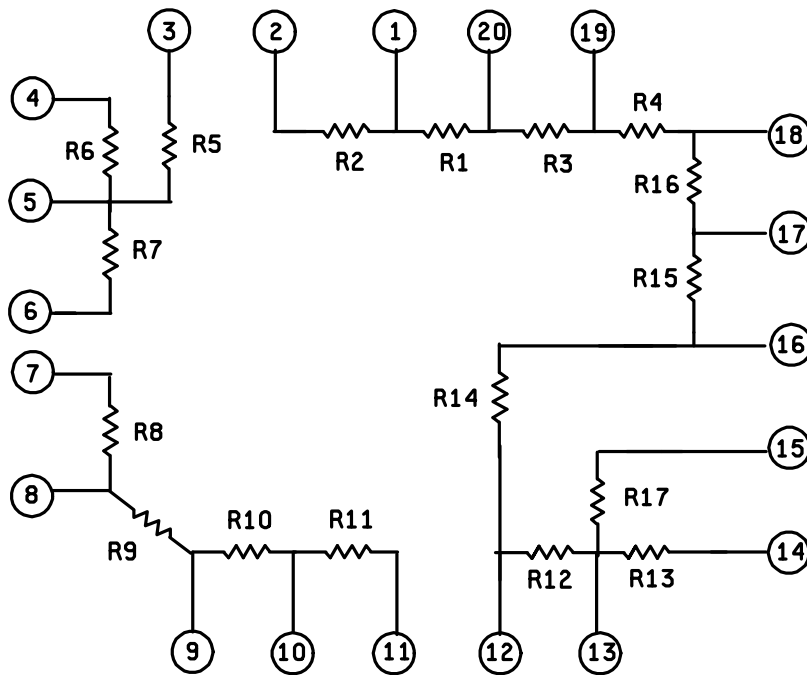
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Dash number	Resistor number	Resistance value (ohms)	Resistance tolerance (\pm percent) ($\pm 25^{\circ}\text{C}$)	Power rating (milliwatts)	Special requirements
-07	R1	24 k	1	25	$\frac{R1}{R2} = \frac{R6}{R5} = \frac{R12}{R11} = \frac{R9}{R10} = .58968 \pm 1\%$
	R2	40.7 k	1	25	
	R3	1 M	5	25	
	R4	4.7 k	5	25	
	R5	40.7 k	5	25	
	R6	24 k	1	25	
	R7	30 k	5	25	
	R8	30 k	5	25	
	R9	24 k	1	25	
	R10	40.7 k	5	25	
	R11	40.7 k	5	25	
	R12	24 k	1	25	
	R13	100 k	5	25	
	R14	4.7 k	5	25	

FIGURE 1. Schematics - Continued.

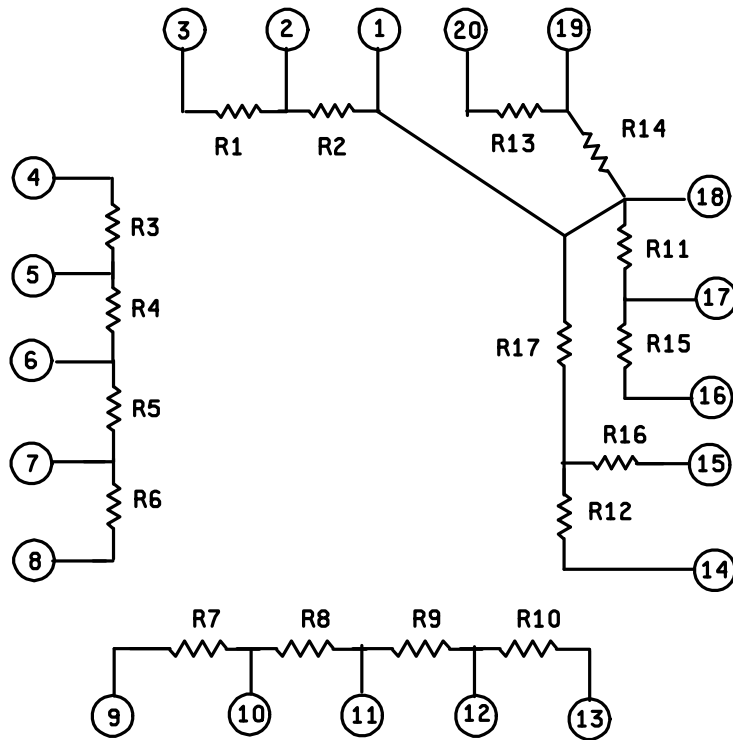
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Dash number	Resistor number	Resistance value (ohms)	Resistance tolerance (± percent) (±25°C)	Power rating (milliwatts)	Special requirements
-08	R1	24 k	1	25	$\frac{R1}{R2} = \frac{R6}{R5} = 0.58968 \pm 1\%$ $\frac{R8}{R9} = \frac{R12}{R13} = 4.0080 \pm 1\%$
	R2	40.7 k	1	25	
	R3	1 M	5	25	
	R4	4.7 k	5	25	
	R5	40.7 k	5	25	
	R6	24 k	1	25	
	R7	30 k	5	25	
	R8	20 k	1	150	
	R9	4.99 k	1	150	
	R10	100 k	5	50	
	R11	10 k	5	50	
	R12	20 k	1	150	
	R13	4.99 k	1	150	
	R14	1 k	5	50	
	R15	49 k	5	25	
	R16	4.7 k	5	25	
	R17	30 k	5	25	

FIGURE 1. Schematics - Continued.

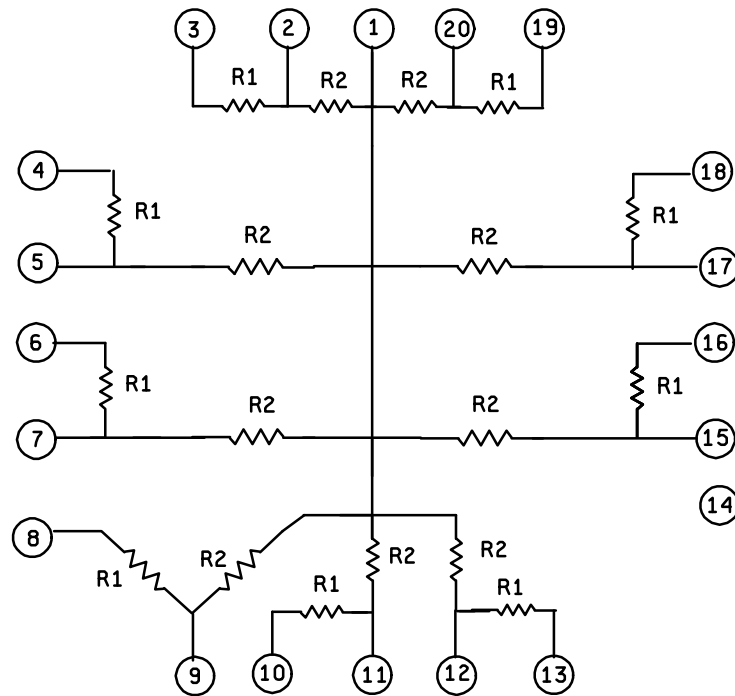
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Dash number	Resistor number	Resistance value (ohms)	Resistance tolerance (\pm percent) ($\pm 25^{\circ}\text{C}$)	Power rating (milliwatts)	Special requirements
-09	R1	10 k	1	50	$\frac{R2}{R1} = 24 \pm .02\%$
	R2	240 k	1	25	
	R3	1 k	1	150	$\frac{R5}{R4} = 24 \pm .02\%$
	R4	2 k	1	150	
	R5	48 k	1	25	
	R6	10 k	2	50	
	R7	16 k	5	50	$\frac{R7}{R8} = 1.6 \pm .02\%$
	R8	10 k	1	50	
	R9	18.33 k	1	25	$\frac{R9}{R10} = 1.833 \pm .02\%$
	R10	10 k	1	50	
	R11	1 k	1	50	
	R12	10k	1	25	$\frac{R13}{R14} = 3.9 \pm .02\%$
	R13	39 k	1	50	
	R14	10 k	1	50	
	R15	2.5 k	2	100	
	R16	100 k	1	25	
	R17	10 k	1	100	

FIGURE 1. Schematics - Continued.

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Dash number	Resistor number	Resistance value (ohms)	Resistance tolerance (\pm percent) ($\pm 25^{\circ}\text{C}$)	Power rating (milliwatts)
-10	R1	20 k	1	55
	R2	150 k	1	55

FIGURE 1. Schematics - Continued..

3.3.2 Resistor power ratings. Resistors shall have a power rating based on continuous full load operation at 70°C (see figure 1). For temperatures in excess of those specified above, the resistor shall be derated in accordance with figure 3.

3.3.3 Package power rating. The package power rating shall be 1.0 watt.

3.3.4 Temperature range. The operating temperature range shall be -55°C to $+150^{\circ}\text{C}$.

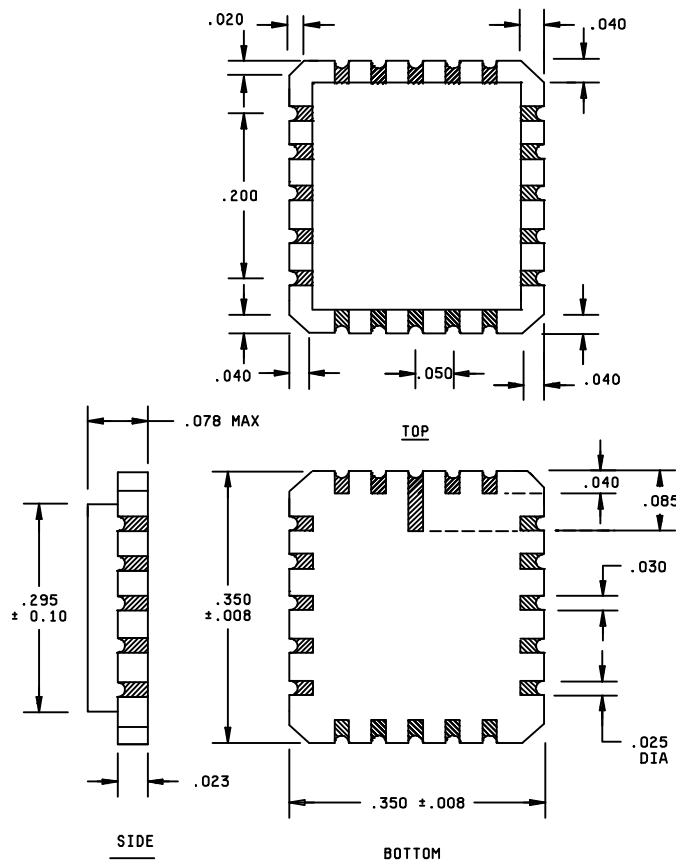
3.3.5 Resistance temperature characteristic. The resistance temperature characteristic shall not exceed ± 100 ppm/ $^{\circ}\text{C}$ for characteristic K.

3.3.6 TC tracking. The TC tracking shall be less than ± 5 ppm/ $^{\circ}\text{C}$ for all resistors with a tolerance of 0.1 percent or less, and for resistance ratios with a tolerance of 0.1 percent or less.

3.3.7 Resistance. The resistance values shall be as specified on figure 1.

3.3.8 Operating voltage. The maximum operating voltage shall be 50 V dc.

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Inches	mm	Inches	mm	Inches	mm	Inches	mm
.003	0.08	.020	0.51	.040	1.02	.270	6.86
.005	0.13	.023	0.58	.050	1.27	.350	8.89
.008	0.20	.025	0.64	.068	1.73		
.018	0.46	.030	0.80	.200	5.08		

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are $\pm .008$ (0.20 mm).
4. Adjacent corner pads may be rounded or diagonally cut to meet the .015 (0.38 mm) minimum requirement.

FIGURE 2. Leadless chip carrier.

3.4 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.

3.5 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.

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3.6 Certificate of compliance. A certificate of compliance shall be required from manufacturers requesting to be listed as a suggested source of supply.

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

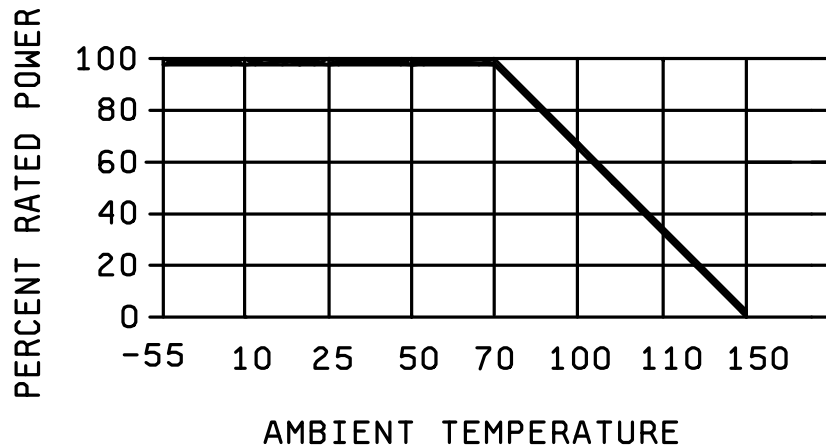


FIGURE 3. Derating curve.

4. VERIFICATION

4.1 Product assurance program. The product assurance program specified in MIL-PRF-914 and maintained in accordance with MIL-STD-790 is not applicable to this document.

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

4.2.1 Failure rate qualification. The failure rate qualification specified in MIL-PRF-914 is not applicable to this document.

4.3 Conformance inspection.

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-914.

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-914.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. 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.

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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 of one copy of the conformance inspection data or certification of compliance that parts have passed conformance inspection with each shipment of parts by the manufacturer.
- c. Requirements for packaging and packing.
- d. Whether the manufacturer performs the group B tests or provides certification of compliance with group B requirements.

6.3 User of record. Coordination of this document, for future revisions, shall be coordinated only with the suggested sources of supply and the users of record of this document. Requests to be added as a recorded user of this drawing should be in writing to: Defense Supply Center, Columbus (DSCC), DSCC-VAT, Post Office Box 3990, Columbus, OH 43216-5000 or telephone (614) 692-0552 or DSN 850-0552.

6.4 Suggested sources of supply. A suggested sources of supply are listed herein. Additional suggested sources will be added as they become available. For assistance in the use of this document, contact Defense Supply Center, Columbus (DSCC), DSCC-VAT, Post Office Box 3990, Columbus, OH 43216-5000, or telephone (614) 692-0552 or (DSN) 850-0552.

DSCC drawing PIN 88016	Vendor similar designation or type number ^{1/}	Vendor CAGE	Vendor's name and address
-01	7062A	57027	IRC, Inc. 4222 S. Staples Street Corpus Christi, TX 78411-2702
-02	7140		
-03	7141		
-04	7142		
-05	7102A		
-06	7143		
-07	7100A		
-08	7101A		
-09	7103A		
-10	7216		

^{1/} Caution. Do not use this number for item acquisition and marking. Similar vendor type may not satisfy the requirements of this drawing.

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