REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED

Prepared in accordance with ASME Y14.100 Selected Item drawing

REV STATUS OF PAGES																		
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	PAGES	1	2	3	4	5	6											

PMIC N/A	**PREPARED BY** Dennis L. Cross	**DEFENSE SUPPLY CENTER, COLUMBUS** **COLUMBUS, OH**
Original date of drawing 22 April 2003	**CHECKED BY** Dennis L. Cross	**TITLE:** **RESISTOR, FIXED, FILM, CHIP, VALUES LESS THAN 1 OHM, STYLE 1206**
	APPROVED BY Kendall A. Cottongim	
	SIZE A / **CODE IDENT. NO.** 037Z3	**DWG NO.** **02010**
	REV	**PAGE 1 OF 6**

AMSC N/A 5905-E413

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

1. SCOPE

1.1 Scope. This drawing describes the requirements for a 0.126 X 0.063 chip resistor of very low resistance values and a wide range of characteristics and tolerances.

1.2 Part or Identifying Number (PIN). The complete PIN is shown in the following example:

02010	-	K	R1000	F	B
Drawing number		Characteristic (see 3.3.1)	Resistance (see 3.3.2)	Tolerance (see 3.3.3)	Termination material (see 3.3.4)

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. 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 issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

DEPARTMENT OF DEFENSE

MIL-PRF-55342 - Resistors, Fixed, Film, Chip, Nonestablished Reliability, Established Reliability, Space Level, General Specification for.

MIL-PRF-55342/7 - Resistors, Fixed, Film, Chip, Nonestablished Reliability, Established Reliability, Space Level, Style RM1206.

STANDARDS

DEPARTMENT OF DEFENSE

MIL-STD-690 - Failure Rate Sampling Plans and Procedures.
MIL-STD-790 - Standard Practice for Established Reliability and High Reliability Qualified Products List (QPL) Systems for Electrical, Electronic, and Fiber Optic Parts Specifications.

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Defense Automation and Production Service (DAPS), Building 4D (DoDSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.2 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, 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-55342, and as specified herein.

3.2 Interface and physical dimensions. The resistor shall meet the interface and physical dimensions as specified in MIL-PRF-55342 and herein (see figure 1).

3.3 Electrical characteristics.

3.3.1 Characteristic. Resistors are available in characteristics K (± 100 ppm), L (± 200 ppm), M (± 300 ppm), N (± 400 ppm), W (± 500 ppm), X (±700 ppm), and Z (±800 ppm) in accordance with 6.5 herein.

3.3.1.1 Characteristics L, N, W, X, and Z. The maximum change in resistance for conformance pertaining to characteristics L, N, W, X, and Z shall be as specified in MIL-PRF-55342, table I, characteristic M.

3.3.2 Resistance. The nominal resistance is expressed in ohms and is identified by five digits. The letter "R" is substituted for one of the significant digits to represent the decimal point. The succeeding digits of the group represent the significant figures. Minimum and maximum values are as specified (see 3.3.2.1 and 6.5).

3.3.2.1 Resistance measurement. When measuring the dc resistance of this device the side opposite the film shall be the referee point.

3.3.2.2 Resistance range. The resistance range shall be 0.0499 ohms to 0.9999 ohms inclusive in accordance with table I and paragraph 6.5 herein.

TABLE I. Resistance value designations.

Designation	Resistance ohms
R0499 to R0999 incl. R1000 to R4999 incl. R5000 to R9990 incl.	0.0499 to 0.0999 incl. 0.1000 to 0.4999 incl. 0.5000 to 0.9990 incl.

3.3.3 Resistance tolerance. Resistors are available in resistance tolerances F (±1 percent), G (±2 percent), J (±5 percent), K (±10 percent), and M (±20 percent) in accordance with paragraph 6.5 herein.

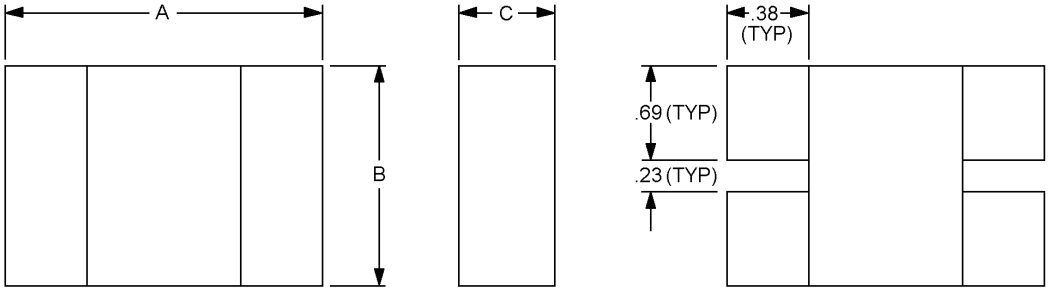
3.3.4 Termination material. Termination material shall be in accordance with MIL-PRF-55342, code letter B.

3.3.5 Power rating. The power rating for all characteristics shall be 250 milliwatts at 70°C derated to zero power at +150°C.

3.3.6 Voltage rating. The maximum continuous working voltage shall not exceed 0.50 volts.

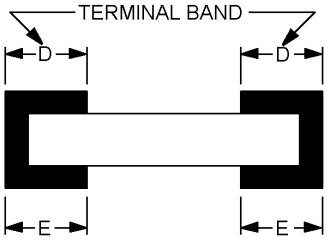
3.4 Marking. Marking of the resistor is not required; however, each unit package shall be marked with the PIN specifed herein (see 1.2), the manufacturer's name or CAGE code, and date lot codes.

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.



CONFIGURATION A

CONFIGURATION C



CONFIGURATION B

mm	Inches
0.13	0.005
0.20	0.008
0.23	0.009
0.25	0.010
0.30	0.012
0.38	0.015
0.51	0.020
0.69	0.027
0.76	0.030
0.84	0.033
1.60	0.063
3.20	0.126

Configuration	Dimension A mm	Dimension B mm	Dimension C mm	Dimension D mm	Dimension E mm
A	3.20 ±0.13	1.60 ±0.13	0.30/0.76	0.51 ±0.025	N/A
B	3.20 ±0.20	1.60 ±0.13	0.38/0.84	0.51 ±0.025	0.51 ±0.025
C	3.20 ±0.20	1.60 ±0.13	0.38/0.84	0.51 ±0.025	0.51 ±0.025

NOTES:
1. Dimensions are in millimeters.
2. Inch equivalents are given for general information only.
3. Unless otherwise specified dimension tolerances are ±0.13 (0.005).
4. The pictorial view 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. Configuration A is not applicable to this document.

FIGURE 1. Chip resistor.

3.6 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-55342 and maintained in accordance with MIL-STD-790 is not applicable to this document.

4.2 Product level qualification. The product level qualification specified in MIL-PRF-55342 and MIL-STD-690 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 inspection (ER level only and the ppm reporting is not applicable) and group B inspection of MIL-PRF-55342.

4.3.2 Certification. The procuring activity may accept a certificate of compliance in lieu of group B inspection.

4.4 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-55342.

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.

6. NOTES

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

6.1 Intended use. Chip resistors are intended for use in thick or thin film circuits where microcircuitry is intended. Chip resistors can also be used in surface mount applications.

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

a. Complete PIN (see 1.2).

b. Requirements for delivery, one copy of the conformance inspection data that parts have passed conformance inspection, with each shipment of parts by the manufacturer.

c. Packaging requirements.

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

6.3 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.

6.4 Users of record. Coordination of this document for future revisions are 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 should be in writing to: DSCC-VAT, PO Box 3990, Columbus, OH 43216-5000 or by telephone (614) 692-0553 or DSN 850-0553.

6.5 Approved sources of supply. Approved sources of supply are listed herein. Additional sources will be added as they become available. For assistance in the use of this drawing, contact DSCC-VAT, PO Box 3990, Columbus, OH 43216-5000 or by telephone (614) 692-0553 or DSN 850-0553.

DSCC drawing PIN 02010-*******	Vendor similar designation or type number 1/	Vendor CAGE	Vendor name and address
Char. K, L; res. Values 0.500 ohms thru 0.999 ohms; Char. M; res. Values 0.300 ohms thru 0.999 ohms; Char. N; 0.200 ohms thru 0.999 ohms; res. Tol. 1, 2, 5, 10, & 20 pct. Char. W, X, Z; res. Values 0.100 ohms thru 0.999 ohms; res. Tol. 1, 2 pct.; res. Values 0.0499 ohms thru 0.999 ohms; res tol. 5, 10, 20 pct.; configuration B.	WA87PS-*****-NS62P WA87PS-*****-NS62*	50316	MINI-SYSTEMS, Incorporated 20 David Road N. Attleboro, MA 02760-0069
Char. K, L, M, N, W, X, Z; res. values 0.0499 ohms thru 0.999 ohms; res. Tol. 1, 2, 5, 10, 20 pct.; configuration B and C.	H1206C*X******* (D02010)	56235	State of the Art, Incorporated 2470 Fox Hill Road. State College, PA 16803-1797
Char. K & M; res. Values 0.0499 ohms to 0.9999 ohms; res. Tol. 1, 2, & 5 pct.; configuration B.	LR1206-01-****-Y	57027	TT Electronics / IRC 4222 S. Staples St. Corpus Christi, TX 78411-2702

1/ Caution: Do not use this number for item acquisition. Items acquired to this number may not satisfy the performance requirements of this drawing.