

REVISIONS			
LT	DESCRIPTION	DATE	APPROVED
F	Add Arcotronics. Change parameters for dash numbers 57 through 63	21 Jan 04	K. Cottongim
G	Add Arcotronics additional capacitors	9 Jul 04	K. Cottongim
H	Add M.E. Technologies capacitors.	22 Apr 05	K. Cottongim
J	Add additional M.E. Technologies capacitors	21 Oct 05	A. Ernst
K	Add additional Arcotronics capacitors	6 Apr 06	M. Radecki
L	Add additional M.E. Technologies capacitors	17 Jul 06	M. Radecki
M	Delete M.E. Technologies capacitors	5 Mar 07	M. Radecki
N	Add Arcotronics additional capacitors	15 Nov 07	M. Radecki
P	Add AVX capacitors	4 June 08	M. Radecki
R	Remove Arcotronics and add Evans capacitors	15 Jan 10	M. Radecki

PIN'S 93026-01 THROUGH 93026-28 ARE INACTIVE FOR NEW DESIGN AFTER DATE OF THIS DRAWING, FOR NEW DESIGN USE PIN'S 93026-29 THROUGH 93026-65.

These capacitors were designed using inch-pound units of measurement. In case of problems involving conflicts between the metric and inch-pound units, the inch-pound units shall rule.

CURRENT DESIGN ACTIVITY CAGE CODE 037Z3
 DEFENSE LOGISTICS AGENCY
 DEFENSE SUPPLY CENTER COLUMBUS
 COLUMBUS, OHIO 43218-3990

Prepared in accordance with ASME Y14.100

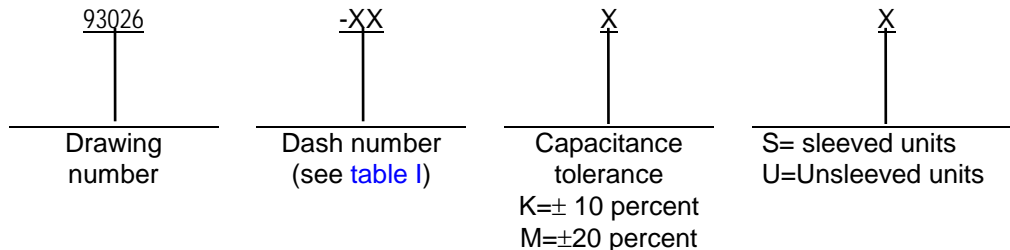
Source control drawing

REV STATUS OF PAGES	REV	R	R	R	R	R	R	R	R	R	R	R	R	R	R				
	PAGES	1	2	3	4	5	6	7	8	9	10	11	12	13					
PMIC N/A	PREPARED BY Ken Bernier							DESIGN ACTIVITY DEFENSE ELECTRONICS SUPPLY CENTER DAYTON, OH 45444-5000											
Original date of drawing 14 January 1993	CHECKED BY Ken Bernier							TITLE CAPACITORS FIXED, ELECTROLYTIC (NONSOLID ELECTROLYTE), TANTALUM (POLARIZED, SINTERED SLUG)											
	APPROVED BY David E. Moore																		
	SIZE A	CODE IDENT. NO. 14933						DWG NO. 93026											
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1. SCOPE

1.1 Scope. This drawing describes the complete requirements for tantalum electrolytic (nonsolid) electrolyte, fixed capacitors, in tantalum cases, insulated and uninsulated.

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



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 cited in the solicitation or contract ([see 6.2](#)).

SPECIFICATIONS

DEPARTMENT OF DEFENSE

[MIL-PRF-39006](#) Capacitors, Fixed, Electrolytic (Non-Solid Electrolyte), Tantalum Established Reliability, General Specification for

STANDARDS

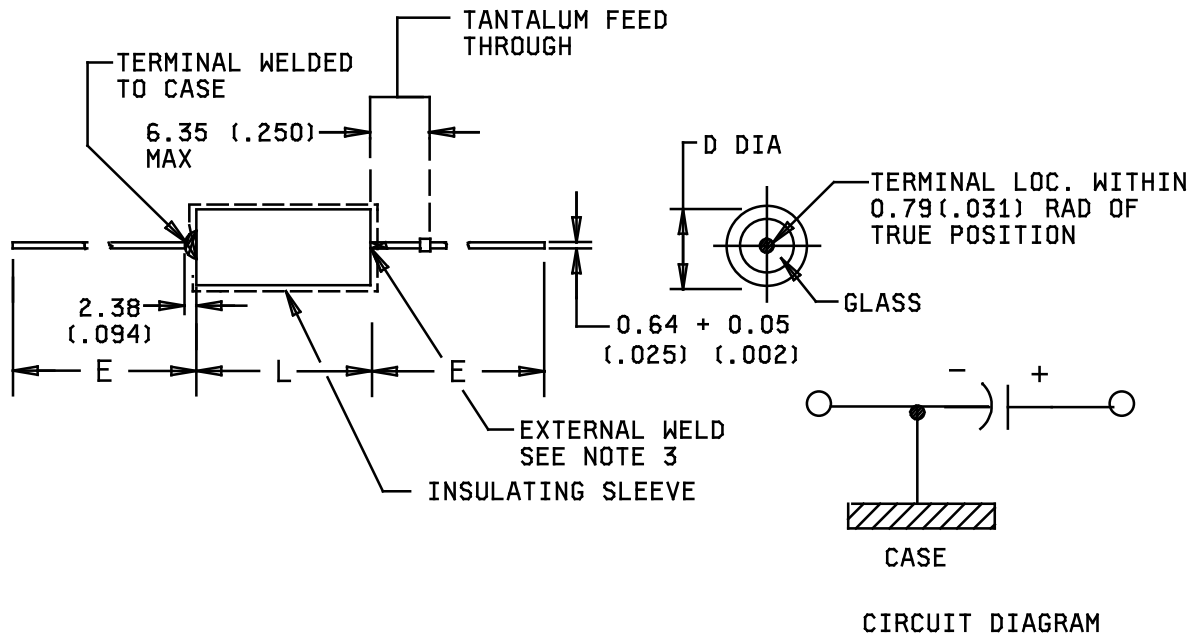
DEPARTMENT OF DEFENSE

[MIL-STD 202](#) Test methods for Electronic and Electrical Component Parts.
[MIL-STD-1276](#) Leads for Electronic Component Parts.
[MIL-STD-1285](#) Marking of Electrical and Electronic Parts.

(Copies of these documents are available online at <http://assist.daps.dla.mil/> or <http://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. In the event of a conflict between the text of this document and the references cited herein (except for related associated specifications, specification sheets, or MS 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.

DEFENSE ELECTRONICS SUPPLY CENTER, DAYTON, OH 45444-5000	SIZE A	CODE IDENT NO. 14933	DWG NO. 93026
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Case size	Dimensions mm (inches)			
	Basic case		Insulated case	
	L +0.79 (.031) -0.41 (.016)	D ±0.41 (.016)	D Max	E ±6.35 (.250)
T1	11.51 (.453)	4.78 (.188)	5.56 (.219)	38.10 (1.500)
T2	16.28 (.641)	7.14 (.281)	7.92 (.312)	57.15 (2.250)
T3	19.46 (.766)	9.52 (.375)	10.31 (.406)	57.15 (2.250)
T4	26.97 (1.062)	9.52 (.375)	10.31 (.406)	57.15 (2.250)
L2	25.60 (1.008)	7.14 (.281)	7.92 (.312)	57.15 (2.250)

NOTES:

1. Dimensions are in millimeters.
2. Inches are in parentheses.
3. The weld shall not be enclosed in the end seal.

FIGURE 1. Dimensions and configuration.

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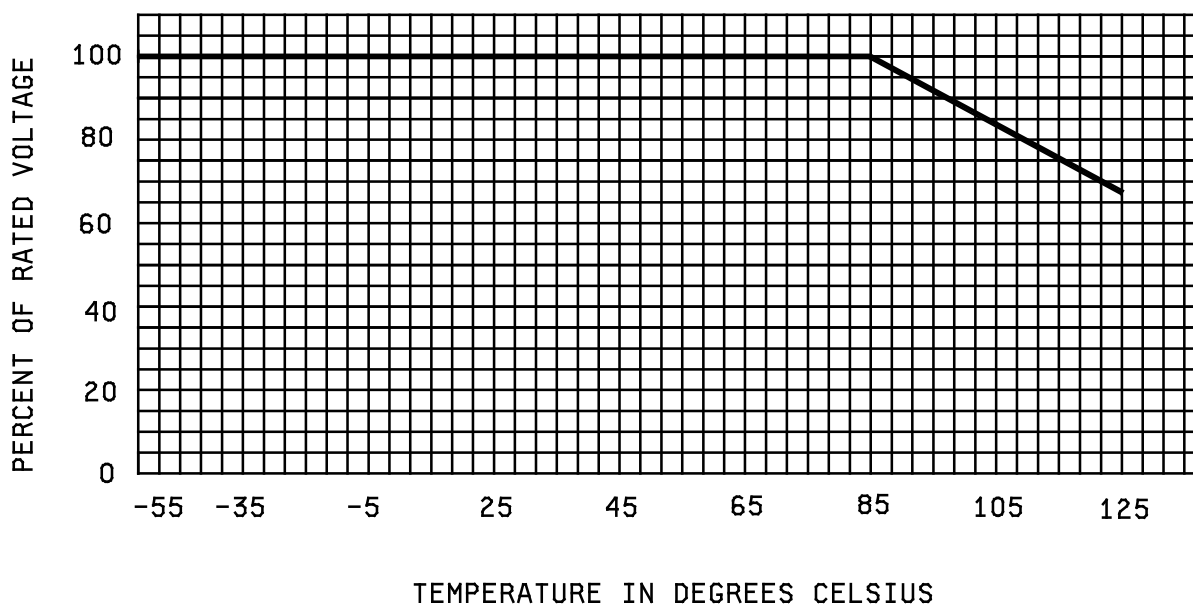


FIGURE 2. Voltage derating with temperature.

3. REQUIREMENTS

3.1 Design and physical dimensions. The design and physical dimensions shall be as specified herein (see figure 1).

3.1.1 Terminals. All terminals shall be permanently secured internally and externally, as applicable. All external joints shall be welded. Terminals shall be tin-lead coated with a minimum lead content of 3 percent and conform to type N32, N51, or N52 as specified in MIL-STD-1276. The length and diameter of the terminals shall be as specified in figure 1.

3.1.2 Pure tin. The use of pure tin as an underplate or final finish is prohibited both internally and externally. Tin content of capacitor 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).

3.1.3 Case. The case shall be made of tantalum.

3.1.4 Sleeving (when applicable). Shrink fitted insulation is used for the sleeving, and it shall lap over the ends of the capacitor body.

3.1.5 Capacitor element. The capacitor element shall consist of an anode of a sintered tantalum slug.

3.1.6 Rated temperature. The capacitor is rated for its given voltage from -55°C to +85°C. It is derated to two thirds of its given voltage at +125°C. See figure 2 for voltage derating with temperature.

3.2 Electrical characteristics. The electrical characteristics shall be as shown in table I and table II.

3.3 Seal. When the capacitors are tested as specified in MIL-PRF-39006, there shall be no evidence of leakage.

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3.4 Shock. The capacitors shall meet the requirements of MIL-PRF-39006 when tested in accordance with test condition I, [method 213 of MIL-STD-202](#).

3.5 Vibration, high frequency. The capacitors shall meet the requirements of MIL-PRF-39006 when tested in accordance with test condition D, [method 204 of MIL-STD-202](#).

3.6 Thermal shock. Thermal shock shall be in accordance with MIL-PRF-39006 when tested for 30 cycles.

3.7 Salt atmosphere (corrosion). Salt atmosphere shall be in accordance with MIL-PRF-39006.

3.8 Solderability. Solderability shall be in accordance with MIL-PRF-39006.

3.9 Terminal strength. Terminal strength shall be in accordance with MIL-PRF-39006.

3.10 Surge voltage. Surge voltage shall be in accordance with MIL-PRF-39006 and [Table II](#) of this drawing.

3.11 Moisture resistance. Moisture resistance shall be in accordance with MIL-PRF-39006.

3.12 Dielectric withstanding voltage. Dielectric withstanding voltage shall be in accordance with MIL-PRF-39006.

3.13 Insulation resistance. Insulation resistance shall be in accordance with MIL-PRF-39006.

3.14 Low temperature storage. Low temperature storage shall be in accordance with MIL-PRF-39006.

3.15 Stability at high and low temperature. Stability at high and low temperature shall be in accordance with MIL-PRF-39006.

3.16 Reverse voltage. There shall be no continuous reverse voltage. Transient reverse voltage surges are acceptable under the following conditions:

- a. The peak reverse voltage is equal to or less than 1.5 volts and the product of the peak current times the duration of the reverse transient is 0.05 ampere-second or less.
- b. The repetition rate of the reverse voltage surges is less than 10 Hz.

3.17 Life testing. The capacitors shall be capable of withstanding a 10,000 hour life test at 85°C at rated voltage, or a 2,000 hour life test at 125°C test at derated voltage. After the test, the capacitors shall meet the following requirements:

- a. DC leakage at (85°C and 125°C) shall not exceed 125 percent of the specified value.
- b. DC leakage at (25°C) shall not exceed the specified value.
- c. Capacitance shall be within +10, -20 percent of initial value.
- d. ESR shall not exceed 200 percent of the specified value.
- e. Dielectric withstanding voltage in accordance with MIL-PRF-39006.
- f. Insulation resistance in accordance with MIL-PRF-39006.
- g. Visual examination shall show no damage, obliteration of marking, or leakage of electrolyte.

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3.18 AC ripple life. AC ripple life shall be in accordance with MIL-PRF-39006 and shall not exceed the specified value (see table I and table II).

3.18.1 AC ripple current multipliers vs. frequency, temperature, and applied voltage. See table III.

3.19 Impedance. Impedance shall be in accordance with MIL-PRF-39006 and shall not exceed the specified value (see table I and table II).

3.20 Barometric pressure (reduced). Barometric pressure shall be in accordance with MIL-PRF-39006.

3.21 Resistance to solvents. Resistance to solvents shall be in accordance with MIL-PRF-39006.

3.22 Resistance to soldering heat. Resistance to soldering heat shall be in accordance with MIL-PRF-39006.

3.23 Marking. Marking shall be in accordance with MIL-STD-1285, except the PIN shall be as specified in 1.2 with the manufacturers name or CAGE code, date code, lot symbol, capacitance (in uF), and rated voltage.

3.24 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.

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

3.26 Manufacturer eligibility. To be eligible for listing as an approved source of supply a manufacturer shall perform all testing specified herein on a sample of parts agreed upon by the manufacturer and DSCC-VA.

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

4. QUALITY ASSURANCE PROVISIONS

4.1 Product assurance program. The product assurance program specified in MIL-PRF-39006 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.

4.3 Failure rate qualification. The failure rate qualification specified in MIL-PRF-39006 is not applicable to this document.

4.4 Quality conformance inspections.

4.4.1 Inspection of product for delivery. Inspection of product for delivery shall consist of group A inspections of MIL-PRF-39006.

4.4.2 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 6.2c). Note, per 3.17, 2000 hour life testing may be substituted for 10,000 hour 85° life testing.

4.5 Visual and mechanical examination. Capacitors shall be examined to verify that the materials, design, construction, physical dimensions, marking, and workmanship are in accordance with applicable requirements of MIL-PRF-39006.

4.6 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use their own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth herein where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

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TABLE I. Electrical characteristics.

DSCC drawing 93026 1/	Cap. (uF) at 25°C and 120 Hz	Case size	Max ESR Ohms	Max DCL uA		Max impedance ohms at -55°C 120 Hz	Maximum capacitance change in percent			AC ripple 85°C 40 KHz mA rms 3/
				120 Hz	25°C		85°C and 125°C	-55°C	+85°C	
25 V dc at 85°C						15 V dc at 125°C				
01--	120	T1	1.3	1	5	20	-30	+8	+12	1250
02--	560	T2	0.83	2	10	8	-49	+10	+15	2100
03--	1200	T3	0.65	3	20	7	-54	+12	+18	2600
04--	1800	T4	0.5	4	25	3	-63	+12	+20	3100
30 V dc at 85°C						20 V dc at 125°C				
05--	100	T1	1.3	1	5	25	-25	+8	+12	1200
06--	470	T2	0.85	2	10	13	-45	+10	+18	1800
07--	1000	T3	0.7	3	20	9	-50	+10	+18	2500
08--	1500	T4	0.6	5	30	5	-60	+10	+20	3000
50 V dc at 85°C						30 V dc at 125°C				
09--	68	T1	1.5	1	5	30	-18	+8	+15	1050
10--	220	T2	0.9	2	10	15	-38	+8	+15	1800
11--	470	T3	0.75	3	25	11	-50	+8	+15	2100
12--	680	T4	0.7	5	40	6	-60	+10	+20	2750
60V dc at 85°C						40 V dc at 125°C				
13--	47	T1	2.0	1	5	40	-16	+8	+12	1050
14--	150	T2	1.1	2	10	18	-35	+8	+15	1650
15--	390	T3	0.9	3	25	13	-50	+8	+15	2100
16--	560	T4	0.8	5	40	8	-60	+8	+15	2750
75V dc at 85°C						50 V dc at 125°C				
17--	33	T1	2.5	1	5	50	-12	+5	+9	1050
18--	110	T2	1.3	2	10	30	-30	+6	+10	1650
19--	330	T3	1.0	3	30	18	-50	+6	+10	2100
20--	470	T4	0.9	5	50	10	-60	+6	+10	2750
100 V dc at 85°C						65 V dc at 125°C				
21--	15	T1	3.5	1	5	110	-9	+3	+3	1050
22--	68	T2	2.1	2	10	35	-22	+4	+4	1650
23--	150	T3	1.6	3	25	23	-38	+6	+6	2100
24--	220	T4	1.2	5	50	18	-50	+6	+6	2750
125 V dc at 85°C						85 V dc at 125°C				
25--	10	T1	5.5	1	5	160	-7	+3	+3	1050
26--	47	T2	2.3	2	10	50	-20	+5	+5	1650
27--	100	T3	1.8	3	25	50	-25	+5	+5	2100
28--	150	T4	1.6	5	50	18	-35	+6	+6	2750

See footnotes at end of table.

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TABLE I. Electrical characteristics - Continued.

DSCC drawing 93026 2/	Cap. (uF) at 25°C and 120 Hz	Case size	Max ESR Ohms	Max DCL uA		Max impedance ohms at -55°C 120 Hz	Maximum capacitance change in percent			AC ripple 85°C 40 KHz mA rms 3/
				120 Hz	25°C		85°C and 125°C	-55°C	+85°C	
				25 V dc at 85°C			15 V dc at 125°C			
29--	120	T1	1.3	1	5	25.0	-42	+8	+12	1250
30--	560	T2	0.83	2	10	12.0	-65	+10	+15	2100
31--	1200	T3	0.65	5	20	7.0	-70	+12	+18	2600
32--	1800	T4	0.5	6	25	7.0	-75	+12	+20	3100
64--	2200	T4	0.5	10	80	10	-90	+30	+50	3200
				30 V dc at 85°C			20 V dc at 125°C			
33--	100	T1	1.3	1	5	25.0	-38	+8	+12	1200
34--	470	T2	0.85	2	10	15.0	-65	+10	+18	1800
35--	1000	T3	0.7	7	25	7.0	-70	+10	+18	2500
36--	1500	T4	0.6	12	35	6.0	-72	+10	+20	3000
				50 V dc at 85°C			30 V dc at 125°C			
37--	68	T1	1.5	1	5	35.0	-25	+8	+15	1050
38--	220	T2	0.9	2	10	17.5	-50	+8	+15	1800
39--	470	T3	0.75	3	25	10.0	-50	+8	+15	2100
40--	680	T4	0.7	5	40	8.0	-58	+10	+20	2750
				60V dc at 85°C			40 V dc at 125°C			
41--	47	T1	2.0	1	5	44.0	-25	+8	+12	1050
42--	150	T2	1.1	2	10	20.0	-40	+8	+15	1650
43--	390	T3	0.9	3	25	15.0	-60	+8	+15	2100
44--	560	T4	0.8	5	40	10.0	-58	+8	+15	2750
65--	1000	T4	1	12	90	20	-90	+30	+50	3200
				75V dc at 85°C			50 V dc at 125°C			
45--	33	T1	2.5	1	5	66.0	-25	+5	+9	1050
46--	110	T2	1.3	2	10	24.0	-35	+6	+10	1650
47--	330	T3	1.0	3	30	12.0	-45	+6	+10	2100
48--	470	T4	0.9	5	50	12.0	-55	+6	+10	2750
				100 V dc at 85°C			65 V dc at 125°C			
49--	15	T1	3.5	1	5	125	-18	+3	+10	1050
50--	68	T2	2.1	2	10	37	-30	+4	+12	1650
51--	150	T3	1.6	3	25	22	-35	+6	+12	2100
52--	220	T4	1.2	5	50	15	-40	+6	+12	2750
				125 V dc at 85°C			85 V dc at 125°C			
53--	10	T1	5.5	1	5	175	-15	+3	+10	1050
54--	47	T2	2.3	2	10	47	-25	+5	+12	1650
55--	100	T3	1.8	3	25	35	-35	+5	+12	2100
56--	150	T4	1.6	5	50	20	-35	+6	+12	2750

See footnotes at end of table.

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TABLE I Electrical characteristics - Continued.

DSCC drawing 93026 <u>2/</u>	Cap. (uF) at 25°C and 120 Hz	Case size	Max ESR Ohms	Max DCL uA		Max impedance ohms at -55°C 120 Hz	Maximum capacitance change in percent			AC ripple 85°C 40 KHz Ma rms <u>3/</u>
				120 Hz	25°C		85°C and 125°C	-55°C	+85°C	
				25 V dc at 85°C		15 V dc at 125°C				
57--	1100	L2	0.5	3	25	7	-60	+20	+45	3200
				30 V dc at 85°C		20 V dc at 125°C				
58--	950	L2	0.5	5	30	7	-55	+18	+35	3200
				50 V dc at 85°C		30 V dc at 125°C				
59--	450	L2	0.6	3	25	7.5	-45	+12	+30	2900
				60 V dc at 85°C		40 V dc at 125°C				
60--	370	L2	0.6	3	25	9	-33	+9	+20	2900
				75 V dc at 85°C		50 V dc at 125°C				
61--	250	L2	0.8	5	30	12	-30	+6	+15	2500
				100 V dc at 85°C		65 V dc at 125°C				
62--	120	L2	1.0	3	25	20.5	-30	+4	+12	2200
				125 V dc at 85°C		85 V dc at 125°C				
63--	90	L2	1.3	5	25	25	-22	+4	+15	2000

1/ Dash numbers 1 thru 28 are inactive for new design, for replacement purposes only.

2/ The complete PIN number shall include symbols to indicate capacitance tolerance and sleeved or unsleeved units.

3/ For ripple current limits at various temperatures, voltages, and frequencies see [table III](#).

TABLE II Voltage.

Voltage		
Rated (85°C) Volts, dc.	Derated (125°C) Volts, dc.	Surge (85°C) Volts, dc.
25	15	28.8
30	20	34.5
50	30	57.5
60	40	69.0
75	50	86.3
100	65	115.0
125	85	144.0

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TABLE III Ripple current multipliers vs. Frequency, temperature and applied voltage. 1/ 2/

Frequency of applied ripple current		120 Hz				800 Hz				1 kHz			
Ambient still air temperature in °C		≤55	85	105	125	≤55	85	105	125	≤55	85	105	125
% of 85° C rated peak voltage	100%	.60	.39	-	-	.71	.43	-	-	.72	.45	-	-
	90%	.60	.46	-	-	.71	.55	-	-	.72	.55	-	-
	80%	.60	.52	.35	-	.71	.62	.42	-	.72	.62	.42	-
	70%	.60	.58	.44	-	.71	.69	.52	-	.72	.70	.52	-
	66-2/3%	.60	.60	.46	.27	.71	.71	.55	.32	.72	.72	.55	.32
Frequency of applied ripple current		10 kHz				40 kHz				100 kHz			
Ambient still air temperature in °C		≤55	85	105	125	≤55	85	105	125	≤55	85	105	125
% of 85° C rated peak voltage	100%	.88	.55	-	-	1.0	.63	-	-	1.1	.69	-	-
	90%	.88	.67	-	-	1.0	.77	-	-	1.1	.85	-	-
	80%	.88	.76	.52	-	1.0	.87	.59	-	1.1	.96	.65	-
	70%	.88	.85	.64	-	1.0	.97	.73	-	1.1	1.07	.80	-
	66-2/3%	.88	.88	.68	.40	1.0	1.0	.77	.45	1.1	1.1	.85	.50

1/ At 125°C the rated voltage of the capacitors decreases to 66 2/3 of the 85°C rated voltage.

2/ The peak of the applied ac ripple voltage plus the applied dc voltage must not exceed the dc voltage rating of the capacitors.

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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, which may be helpful, but is not mandatory.)

6.1 Intended use. Capacitors conforming to this drawing are intended for use when military specifications do not exist and qualified military devices that will perform the required function are not available for OEM application. This drawing is intended exclusively to prevent the proliferation of unnecessary duplicate specifications, drawings, and stock catalog listings. When a military specification exists and the product covered by this drawing has been qualified for listing, this drawing becomes obsolete and will not be used for new design.

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 quality conformance inspection data or certificate of compliance that parts have passed quality conformance inspection with each shipment of parts by the manufacturer.
- c. Whether the manufacturer performs the group B inspections, or provides a certificate of compliance with group B inspections.
- d. Requirements for packaging and packing.

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 manufacturer 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 been shown to inhibit the growth of tin whiskers. For additional information in this matter, refer to [ASTM-B545](#) (Standard Specification for Electrodeposited Coatings of Tin)

6.4 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 should be in writing to: Defense Supply Center, Columbus, ATTN: DSCC/VAT, Post Office Box 3990, Columbus, OH 43218-3990 or emailed to capacitorfilter@dsc.dla.mil also by telephone (614) 692-0563 or DSN 850-0563.

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 Defense Supply Center, Columbus ATTN: DSCC-VAT, Post Office Box 3990, Columbus, OH 43218-3990 or e-mailed to capacitorfilter@dsc.dla.mil also by telephone (614) 692-0563 or DSN 850-0563.

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6.6 Similar vendor types.

TABLE IV Similar vendor types.

DSCC drawing 93026-	Similar vendor type A 1/	Similar vendor type B See 1/	Similar vendor type C See 1/
01--	ST120-25T1--		TWAA127K025
02--	ST560-25T2--		TWAB567K025
03--	ST1200-25T3--		TWAD128K025
04--	ST1800-25T4--		TWAE188K025
05--	ST100-30T1--		TWAA107K030
06--	ST470-30T2--		TWAB477K030
07--	ST1000-30T3--		TWAD108K030
08--	ST1500-30T4--		TWAE158K030
09--	ST68-50T1--		TWAA686K050
10--	ST220-50T2--		TWAB227K050
11--	ST470-50T3--		TWAD477K050
12--	ST680-50T4--	HCD050681	TWAE687K050
13--	ST47-60T1--		TWAA476K060
14--	ST150-60T2--		TWAB157K060
15--	ST390-60T3--		TWAD397K060
16--	ST560-60T4--	HCD060561	TWAE567K060
17--	ST33-75T1--		TWAA336K075
18--	ST110-75T2--	HCB075111	TWAB117K075
19--	ST330-75T3--		TWAD337K075
20--	ST470-75T4--	HCD075471	TWAE477K075
21--	ST15-100T1--		TWAA156K100
22--	ST68-100T2--	HCB100680	TWAB686K100
23--	ST150-100T3--		TWAD157K100
24--	ST220-100T4--	HCD100221	TWAE227K100
25--	ST10-125T1--		TWAA106K125
26--	ST47-125T2--		TWAB476K125
27--	ST100-125T3--		TWAD107K125
28--	ST150-125T4--	HCD125151	TWAE157K125
57--	ST1100-25L2--		
58--	ST950-30L2--		
59--	ST450-50L2--		
60--	ST370-60L2--		
61--	ST250-75L2--		
62--	ST120-100L2--		
63--	ST90-125L2--		
64--			TWAE228K025
65--			TWAE108M060

1/ Caution. Do not use this number for item acquisition and marking.
The similar vendor type may not satisfy the performance requirements of this drawing.

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6.7 Substitutability data. See [table V](#)

TABLE V. Substitutability data.

Substitute item 93026-	Substitutable for 93026-	Substitute item 93026-	Substitutable for 93026-
29--	01--	43--	15--
30--	02--	44--	16--
31--	03--	45--	17--
32--	04--	46--	18--
33--	05--	47--	19--
34--	06--	48--	20--
35--	07--	49--	21--
36--	08--	50--	22--
37--	09--	51--	23--
38--	10--	52--	24--
39--	11--	53--	25--
40--	12--	54--	26--
41--	13--	55--	27--
42--	14--	56--	28--

6.8 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 Defense Supply Center, Columbus, ATTN: DSCC-VAT, P. O. Box 3990, Columbus, OH 43216-5000, by e-mail to capacitorfilter@dsc.dla.mil, or by telephone (614) 692-0563 or DSN 850-0563.

<u>Vendor</u>	<u>Vendor CAGE number</u>	<u>Vendor name and address</u>
A	05079	Vishay Intertechnology Inc 2813 West Road Bennington, VT 05201-5017
B	06MN5	Evans Capacitor Company 72 Boyd Avenue East Providence, RI 02914-1202
C	17554	AVX Tantalum Corporation 401 Hill Street Biddeford, ME 04005-4327

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