

REVISIONS			
LTR	DESCRIPTION	DATE (YR-MO-DA)	APPROVED
F	Add Arcotronics. Change parameters for dash numbers 57 through 63.	04-01-21	K. Cottongim
G	Add Arcotronics additional capacitors.	04-07-09	K. Cottongim
H	Add M.E. Technologies capacitors.	05-04-22	K. Cottongim
J	Add additional M.E. Technologies capacitors.	05-10-21	Andrew Ernst
K	Add additional Arcotronics capacitors.	06-04-06	Michael A. Radecki
L	Add additional M.E. Technologies capacitors.	06-07-17	Michael A. Radecki
M	Delete M.E. Technologies capacitors.	07-03-05	Michael A. Radecki
N	Add Arcotronics additional capacitors.	07-11-15	Michael A. Radecki
P	Add AVX capacitors.	08-06-04	Michael A. Radecki
R	Remove Arcotronics and add Evans capacitors.	10-01-15	Michael A. Radecki
T	Corrected the lead diameter tolerance in figure 1 and editorial changes throughout.	13-09-09	Michael A. Radecki
U	Add new PINs for vendor A.	14-10-31	Michael A. Radecki
V	Add approved sources of supply.	17-05-23	Michael A. Radecki
W	Added an approved source of supply.	21-08-05	Michael A. Radecki
Y	Updated vendor offerings and contact information.	22-03-29	Michael A. Radecki
AA	Updated vendor offerings.	24-02-22	Michael A. Radecki

PIN'S 93026-01 THROUGH 93026-28 ARE INACTIVE FOR NEW DESIGN AFTER 1 OCTOBER 1993, 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
DLA LAND AND MARITIME
COLUMBUS, OHIO 43218-3990



Prepared in accordance with [ASME Y14.100](#)

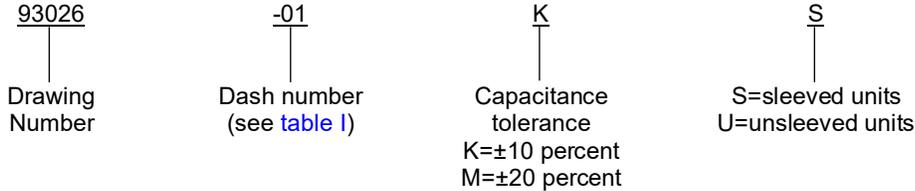
Selected item drawing

REV STATUS OF PAGES	REV	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA						
	PAGES	1	2	3	4	5	6	7	8	9	10	11	12						
PMIC N/A	PREPARED BY Ken Bernier						DESIGN ACTIVITY DLA LAND AND MARITIME COLUMBUS, OH 43218-3990												
Original date of drawing 93-01-14	CHECKED BY Ken Bernier						TITLE CAPACITOR, FIXED, ELECTROLYTIC (NONSOLID ELECTROLYTE), TANTALUM (POLARIZED, SINTERED SLUG)												
	APPROVED BY David E. Moore																		
	SIZE A	CAGE CODE 14933				DWG NO. 93026													
	SCALE N/A	REV AA				PAGE 1 OF 12													

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 is as follows:



2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this drawing. This section does not include documents cited in other sections of this drawing or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents in sections 3 and 4 of this drawing, whether or not they are listed here.

2.2 Government documents.

2.2.1 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](#)).

DEPARTMENT OF DEFENSE SPECIFICATIONS

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

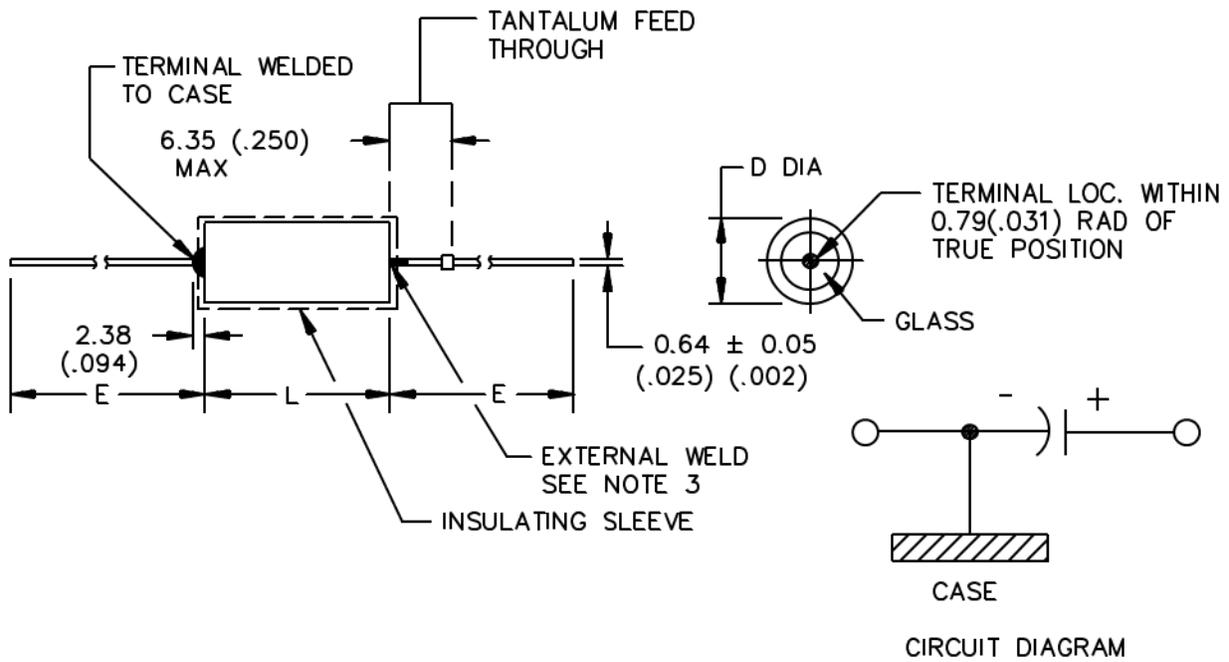
DEPARTMENT OF DEFENSE STANDARDS

- [MIL-STD-202-204](#) - Method 204, Vibration, High Frequency
- [MIL-STD-202-213](#) - Method 213, Shock (Specified Pulse)
- [MIL-STD-790](#) - Standard Practice for Established Reliability and High Reliability Qualified Products List (QPL) Systems for Electrical, Electronic, and Fiber Optic Parts Specifications.
- [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 <https://quicksearch.dla.mil/>.)

2.3 Order of precedence. Unless otherwise noted herein or in the contract, 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	CAGE CODE 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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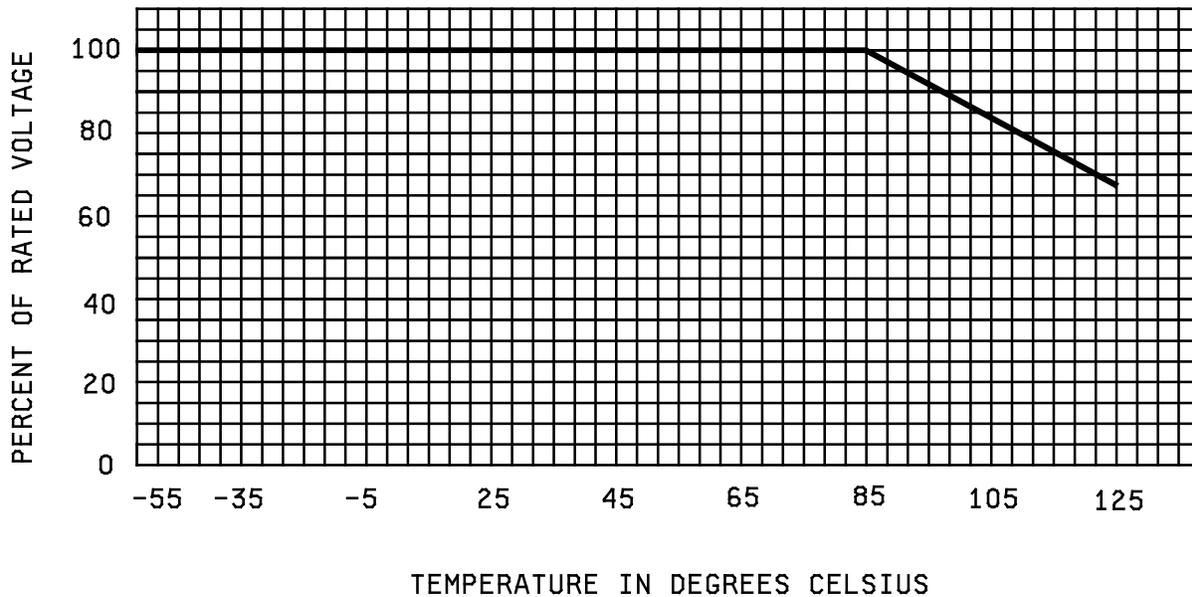


FIGURE 2. Voltage derating with temperature.

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 shall be 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, MIL-STD-202-213.

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

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 (see table I).
- b. DC leakage at (+25°C) shall not exceed the specified value (see table I).
- c. Capacitance shall be within +10, -20 percent of initial value.
- d. ESR shall not exceed 200 percent of the specified value (see table I).
- 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 III).

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).

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 μF), and rated voltage.

3.24 Certificate of compliance. A certificate of compliance shall be required from manufacturers requesting to be an approved source of supply.

3.25 Manufacturer eligibility. To be eligible for listing as an approved source of supply, a manufacturer shall be listed on the MIL-PRF-39006 Qualified Products List (QPL) for at least one style or perform all testing specified herein on a sample of parts agreed upon by the manufacturer and DLA Land and Maritime-VA.

3.26 Recycled, recovered, environmentally preferable, or biobased materials. Recycled, recovered, environmentally preferable, or biobased 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.

3.27 Workmanship. Capacitors 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-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 inspection of MIL-PRF-39006. Group B inspection shall be required when specified in the contract or purchase order (see 6.2c). Group B tests are per MIL-PRF-39006, except as defined in paragraph 3.17. Note: 2,000 hour life testing @ +125°C may be substituted for 10,000 hour @ +85° life testing (see 3.17).

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).

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 (see 6.2), 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 (see 6.2), 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.

DLA Land and Maritime drawing PIN 93026- 1/2	Cap. (μ F) at +25°C and 120 Hz	Case size	Max. ESR Ohms 120 Hz	Max. DCL (μ A)		Max. impedance -55°C 120 Hz	Maximum capacitance change in percent			AC ripple +85°C 40 KHz mA rms 3/
				+25°C	+85°C and +125°C		-55°C	+85°C	+125°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
				60 V _{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
				75 V _{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.

DLA Land and Maritime drawing PIN 93026- <u>1/</u> <u>2/</u>	Cap. (μ F) at +25°C and 120 Hz	Case size	Max. ESR Ohms 120 Hz	Max. DCL (μ A)		Max. impedance -55°C 120 Hz	Maximum capacitance change in percent			AC ripple +85°C 40 KHz mA rms <u>3/</u>
				+25°C	+85°C and +125°C		-55°C	+85°C	+125°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
57 --	1100	L2	0.5	3	25	7	-60	+20	+45	3200
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
58 --	950	L2	0.5	5	30	7	-55	+18	+35	3200
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
59 --	450	L2	0.6	3	25	7.5	-45	+12	+30	2900
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
				60 V _{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
60 --	370	L2	0.6	3	25	9	-33	+9	+20	2900
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
				75 V _{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
61 --	250	L2	0.8	5	30	12	-30	+6	+15	2500
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
62 --	120	L2	1.0	3	25	20.5	-30	+4	+12	2200
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
63 --	90	L2	1.3	5	25	25	-22	+4	+15	2000
55 --	100	T3	1.8	3	25	35	-35	+5	+12	2100
56 --	150	T4	1.6	5	50	20	-35	+6	+12	2750

1/ Dash numbers 1 thru 28 are inactive for new design and are 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](#).

**DEFENSE ELECTRONICS SUPPLY CENTER,
DAYTON, OH 45444-5000**

**SIZE
A**

**CAGE CODE
14933**

**DWG NO.
93026**

REV AA

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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

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	100%	.60	.39	-	-	.71	.43	-	-	.72	.45	-	-
+85°C	90%	.60	.46	-	-	.71	.55	-	-	.72	.55	-	-
rated	80%	.60	.52	.35	-	.71	.62	.42	-	.72	.62	.42	-
peak	70%	.60	.58	.44	-	.71	.69	.52	-	.72	.70	.52	-
voltage	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	100%	.88	.55	-	-	1.0	.63	-	-	1.1	.69	-	-
+85°C	90%	.88	.67	-	-	1.0	.77	-	-	1.1	.85	-	-
rated	80%	.88	.76	.52	-	1.0	.87	.59	-	1.1	.96	.65	-
peak	70%	.88	.85	.64	-	1.0	.97	.73	-	1.1	1.07	.80	-
voltage	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.

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 material 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.

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

- a. Complete DLA Land and Maritime CAGE code and 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 (see 4.4.1 and 4.4.2).
- 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 source(s) of supply and the users of record of this document. Requests to be added as a recorded user of this drawing may be achieved online at capacitorfilter@dla.mil or if in writing to: DLA Land and Maritime, ATTN: VAT, Post Office Box 3990, Columbus, OH 43218-3990 or by telephone (614) 692-4709 or DSN 850-4709.

6.5 Changes from previous issue. The margins of this drawing are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

6.6 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 --

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6.7 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 DLA Land and Maritime, ATTN: VAT, P. O. Box 3990, Columbus, OH 43218-3990, by e-mail to capacitorfilter@dla.mil, or by telephone (614) 692-4709 or DSN 850-4709.

DLA Land and Maritime drawing PIN 93026- 1/	Vendors A and E Similar type	Vendor B Similar type	Vendor C Similar type	Vendor D Similar type	Vendor F Similar type
01 --, 29 --	ST120-25T1 --		TWAA127K025	WT84A127-025H-	
02 --, 30 --	ST560-25T2 --		TWAB567K025	WT84B567-025H-	TWAB567-025 --
03 --, 31 --	ST1200-25T3 --		TWAD128K025	WT84C128-025H-	TWAD128-025 --
04 --, 32 --	ST1800-25T4 --		TWAE188K025	WT84D188-025H-	TWAE188-025 --
05 --, 33 --	ST100-30T1 --		TWAA107K030	WT84A107-030H-	
06 --, 34 --	ST470-30T2 --		TWAB477K030	WT84B477-030H-	TWAB477-030 --
07 --, 35 --	ST1000-30T3 --		TWAD108K030	WT84C108-030H-	TWAD108-030 --
08 --, 36 --	ST1500-30T4 --		TWAE158K030	WT84D158-030H-	TWAE158-030 --
09 --, 37 --	ST68-50T1 --		TWAA686K050	WT84A686-050H-	
10 --, 38 --	ST220-50T2 --		TWAB227K050	WT84B227-050H-	
11 --, 39 --	ST470-50T3 --		TWAD477K050	WT84C477-050H-	TWAD477-050 --
12 --, 40 --	ST680-50T4 --	HCD050681	TWAE687K050	WT84D687-050H-	TWAE687-050 --
13 --, 41 --	ST47-60T1 --		TWAA476K060	WT84A476-060H-	
14 --, 42 --	ST150-60T2 --		TWAB157K060	WT84B157-060H-	
15 --, 43 --	ST390-60T3 --		TWAD397K060	WT84C397-060H-	TWAD397-060 --
16 --, 44 --	ST560-60T4 --	HCD060561	TWAE567K060	WT84D567-060H-	TWAE567-060 --
17 --, 45 --	ST33-75T1 --		TWAA336K075	WT84A336-075H-	
18 --, 46 --	ST110-75T2 --	HCB075111	TWAB117K075	WT84B117-075H-	
19 --, 47 --	ST330-75T3 --		TWAD337K075	WT84C337-075H-	TWAD337-075 --
20 --, 48 --	ST470-75T4 --	HCD075471	TWAE477K075	WT84D477-075H-	TWAE477-075 --
21 --, 49 --	ST15-100T1 --		TWAA156K100	WT84A156-100H-	
22 --, 50 --	ST68-100T2 --	HCB100680	TWAB686K100	WT84B686-100H-	
23 --, 51 --	ST150-100T3 --		TWAD157K100	WT84C157-100H-	TWAD157-100 --
24 --, 52 --	ST220-100T4 --	HCD100221	TWAE227K100	WT84D227-100H-	TWAE227-100 --
25 --, 53 --	ST10-125T1 --		TWAA106K125	WT84A106-125H-	
26 --, 54 --	ST47-125T2 --		TWAB476K125	WT84B476-125H-	
27 --, 55 --	ST100-125T3 --		TWAD107K125	WT84C107-125H-	TWAD107-125 --
28 --, 56 --	ST150-125T4 --	HCD125151	TWAE157K125	WT84D157-125H-	TWAE157-125 --
57 --	ST1100-25L2 --				
58 --	ST950-30L2 --				
59 --	ST450-50L2 --				
60 --	ST370-60L2 --				
61 --	ST250-75L2 --				
62 --	ST120-100L2 --				
63 --	ST90-125L2 --				
64 --	ST2200-25T4 --		TWAE228K025		TWAE228-025 --
65 --	ST1000-60T4 --		TWAE108-060		TWAE108-060 --

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

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<u>Vendor</u>	<u>Vendor CAGE</u>	<u>Vendor name and address</u>
A	05079	Vishay Sprague, Inc 2813 West Road Bennington, VT 05201-5017
B	06MN5	Evans Capacitor Company 72 Boyd Avenue East Providence, RI 02914-1202
C	17554	KYOCERA AVX Components (Biddeford) Corporation 401 Hill Street Biddeford, ME 04005-4327
D	01884	Exxelia USA, Inc. 1221 North US Highway 17-92 Longwood, FL 32750 Plant: Exxelia Tantalum Z.I. de Brais BP 194 44604 Saint Nazaire Cedex France
E	2800A	Vishay Israel, Ltd. Dr. Felix Zandman, 3; Industrial Park Dimona 8610002 Israel
F	1154G	KYOCERA AVX Components s.r.o. Dvorakova 328 563 01 Lanskrout Czech Republic

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