

NOTICE - WHEN GOVERNMENT DRAWINGS, SPECIFICATIONS, OR OTHER DATA ARE USED FOR ANY PURPOSE OTHER THAN IN CONNECTION WITH A DEFINITELY RELATED GOVERNMENT PROCUREMENT OPERATION, THE UNITED STATES GOVERNMENT THEREBY INCURS NO RESPONSIBILITY FOR ANY OBLIGATION WHATSOEVER; AND THE FACT THAT THE GOVERNMENT MAY HAVE FORMULATED, FURNISHED, OR IN ANY WAY SUPPLIED THE SAID DRAWINGS, SPECIFICATIONS OR OTHER DATA IS NOT TO BE REGARDED BY IMPLICATION OR OTHERWISE AS IN ANY MANNER LICENSING THE HOLDER OR ANY OTHER PERSON OR CORPORATION, OR CONVEYING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THEREBY.

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
C	REPLACES REV B WITH CHANGE PER TORR 00513		W.K.
D	REPLACED BY REV E WITH CHANGES PER TORR 01161	8/24/63	Coll.

NOTES:

- GENERAL REQUIREMENTS:
 - SPRAGUE TYPE 250 D PER DATA SOURCE NOTED EXCEPT AS AND IN ADDITION TO THE REQUIREMENTS SPECIFIED HEREIN.
 - ELECTRICAL RATINGS: PER TABLE II ON SHEET 2.
 - CAPACITANCE AT 120 CPS @ 25°C: PER SHEET 2.
CAPACITANCE TOLERANCE: ± 10% @ 120 CPS @ 25°C.
 - MAXIMUM DISSIPATION FACTOR

AT -80°C:	0.08
AT +25°C:	0.06
AT +85°C:	0.08
AT +125°C:	0.09
 - OPERATING TEMPERATURE RANGE: -80°C TO +85°C.
 - MAX D.C. LEAKAGE CURRENT: .05 UA/UF - VOLT, BUT IN NO CASE NEED THE LEAKAGE CURRENT BE LESS THAN 1 UA.
- CONSTRUCTION REQUIREMENTS:
 - INSULATING SLEEVE: MYLAR, CAPABLE OF WITHSTANDING 2000 VDC FOR 1 MIN ± 5 SEC.
 - LEADS: UNITS SHALL HAVE WELDABLE NICKEL LEADS PER ND 1015400.
A CERTIFICATE OF COMPLIANCE OF LEAD MATERIAL SHALL ACCOMPANY EACH LOT SHIPPED.
EACH LEAD SHALL BE CAPABLE OF WITHSTANDING TWO (2) BENDS, UNDER A TWO (2) POUND VERTICAL PULL (LEADS VERTICAL WITH RESPECT TO UNIT BODY). TWO (2) BENDS SHALL BE ACCOMPLISHED BY MOVING THE BODY OF THE UNIT, WHILE IN THE SAME PLANE THROUGH 90° IN ONE DIRECTION, THEN BACK 180° TO THE OPPOSITE DIRECTION, THEN BACK 90° TO THE ORIGINAL POSITION. NO MECHANICAL DAMAGE OR LACK OF PERFORMANCE SHALL BE EVIDENCED AFTER THE TEST.
EACH LEAD SHALL BE CAPABLE OF WITHSTANDING AN AXIAL PULL OF FOUR (4) POUNDS MINIMUM.
 - DIMENSIONS AND TOLERANCES: PER TABLE I ON SHEET 1 AND SKETCH.
 - MARKING: MARK UNITS PER MIL-STD-130 WITH MANUFACTURER'S NAME AND/OR SYMBOL, TYPE NUMBER, VOLTAGE AND CAPACITANCE RATING AND POLARITY.
MARKING OF UNIT PACKAGES AND EXTERIOR SHIPPING CONTAINERS SHALL INCLUDE NASA NUMBER, DASH NUMBER AND REVISION LETTER.
- ENVIRONMENTAL REQUIREMENTS:
 - UNITS SHALL BE CAPABLE OF MEETING THE ENVIRONMENTAL REQUIREMENTS OF ND1002000.
- SUPPLIER SHALL CONFORM TO QUALITY ASSURANCE PROVISIONS OF ND1015404 SECTION
- BURN-IN (BY SUPPLIER):
 - ALL CAPACITORS SHALL BE SUBJECTED TO A 250 HOUR BURN-IN PERIOD AT RATED VOLTAGE AND +85°C. UNDER THESE CONDITIONS THE FOLLOWING RESULTS SHALL BE OBTAINED. PRE AND POST BURN-IN DATA REPRESENTED BY THESE RESULTS SHALL BE SUPPLIED WITH ALL CAPACITORS SHIPPED. DATA SHALL CONSIST OF MEASUREMENTS FOR EACH UNIT OF THE LOT.
 - THE CAPACITANCE SHALL NOT EXCEED THE INITIAL REQUIREMENTS OF THE APPLICABLE DRAWING.
 - THE LEAKAGE CURRENT AND DISSIPATION FACTOR SHALL NOT EXCEED THE INITIAL LIMITS SPECIFIED BY THE APPLICABLE DRAWING.
- INTERPRET DRAWING PER MIL-D-70327.

REV-C	REV-	REV-
REV-A	REV-	REV-
SHEET 1	SHEET 2	SHEET 3
REVISION STATUS OF SHEETS		

FOR INFORMATION ONLY

CLASS B RELEASE TDR No. 00165 DATE 12/12/62

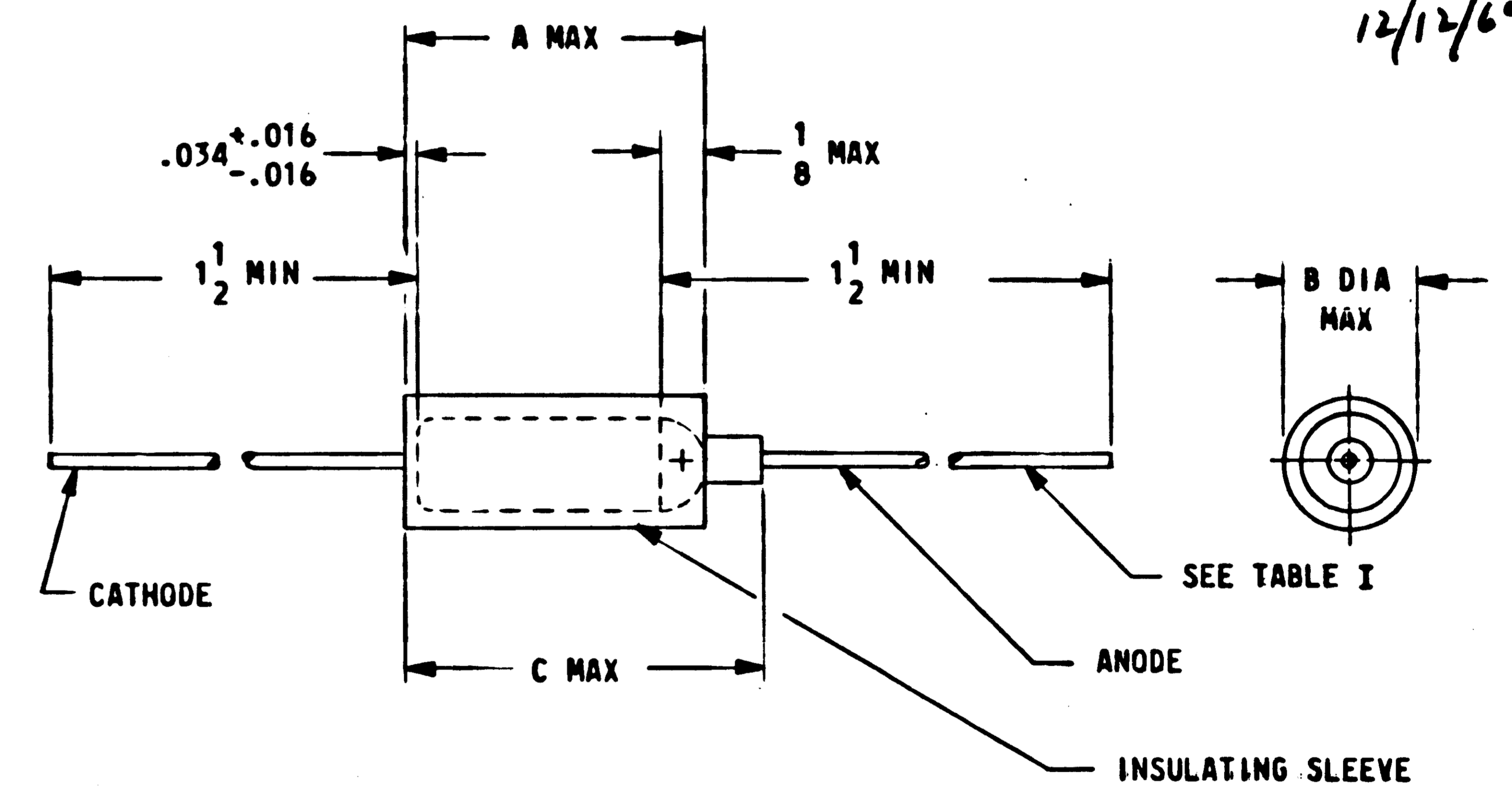


TABLE I

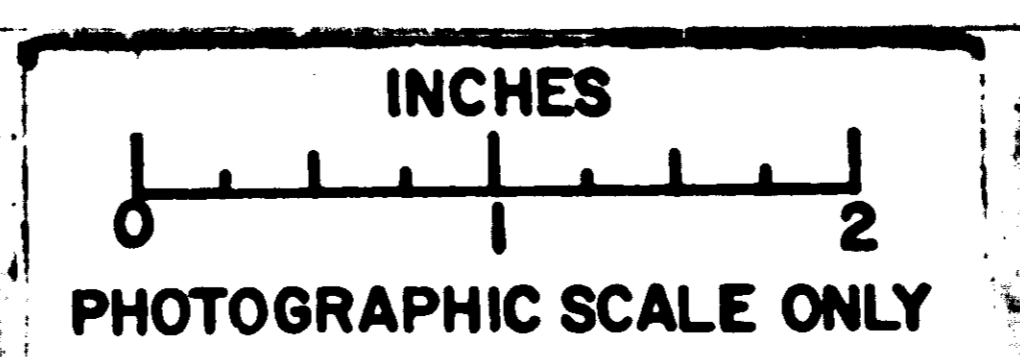
CASE SIZE	NOM LEAD SIZE		DIMENSIONS		
	AWG	DIA	A MAX	B MAX	C MAX
A	24	.020	.353	.151	.503
B	24	.020	.541	.201	.691
C	22	.0253	.753	.305	.903
D	22	.0253	.853	.367	1.003

ORIGINAL SOURCE OF SUPPLY:
SPRAGUE ELECTRIC COMPANY
NORTH ADAMS, MASSACHUSETTS
CODE IDENT NO. 56289

DATA SOURCE:
SPRAGUE SPECIFICATION
NO'S DV-102A AND DV-103
DATED APRIL 14, 1961

Ⓞ REPLACED BY REV E WITH CHANGES

QTY REQ	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
LIST OF MATERIALS			
MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.		MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
DRAWN <i>Ray Wheeler</i> DATE 29 Dec 62 CHECKED <i>W. Hayward</i> 4 DEC 62 APPROVAL <i>E.C. Wall</i> 11 Dec 62		CAPACITOR, FIXED, TANTALUM SPECIFICATION CONTROL DRAWING	
MATERIAL SEE NOTES		CODE IDENT NO. SIZE C	NASA DRAWING NO. 1006755
HEAT TREATMENT NONE		SCALE NONE WT	SHEET 1 OF 3
FINAL FINISH NONE			
NEXT ASSY	USED ON	APPLICATION	



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1006755

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
D	REPLACED BY REV E WITH CHANGES PER TDRR 01161	8 May 63	CK

DASH NO.	CAPACITANCE UF ±10%	CASE STYLE	RATED WORKING VOLTAGE DC AT 25°C	RATED VAC 1/ AT 120 CPS	SPRAGUE PART NUMBER
1	5.6	A	6	.5	250D565X9006A2
2	6.8	A	6	.5	250D685X9006A2
3	47.0	B	6	.5	250D476X9006B2
4	56.0	B	6	.5	250D566X9006B2
5	150.0	C	6	.5	250D157X9006R2
6	180.0	C	6	.5	250D187X9006R2
7	270.0	D	6	.5	250D277X9006S2
8	330.0	D	6	.5	250D337X9006S2
9	3.9	A	10	1.0	250D395X9010A2
10	4.7	A	10	1.0	250D475X9010A2
11	27.0	B	10	1.0	250D276X9010B2
12	33.0	B	10	1.0	250D336X9010B2
13	39.0	B	10	1.0	250D396X9010B2
14	100.0	C	10	1.0	250D107X9010R2
15	120.0	C	10	1.0	250D127X9010R2
16	180.0	D	10	1.0	250D187X9010S2
17	220.0	D	10	1.0	250D227X9010S2
18	2.7	A	15	1.4	250D275X9015A2
19	3.3	A	15	1.4	250D335X9015A2
20	18.0	B	15	1.4	250D186X9015B2
21	22.0	B	15	1.4	250D226X9015B2
22	56.0	C	15	1.4	250D566X9015R2
23	68.0	C	15	1.4	250D686X9015R2
24	82.0	D	15	1.4	250D826X9015S2
25	150.0	D	15	1.4	250D157X9015S2
26	1.2	A	20	2.5	250D125X9020A2
27	1.5	A	20	2.5	250D155X9020A2
28	1.8	A	20	2.5	250D185X9020A2
29	2.2	A	20	2.5	250D225X9020A2
30	8.2	B	20	2.5	250D825X9020B2
31	10.0	B	20	2.5	250D106X9020B2
32	12.0	B	20	2.5	250D126X9020B2
33	15.0	B	20	2.5	250D156X9020B2
34	33.0	C	20	2.5	250D336X9020R2
35	39.0	C	20	2.5	250D396X9020R2
36	47.0	C	20	2.5	250D476X9020R2

DASH NO.	CAPACITANCE UF ±10%	CASE STYLE	RATED WORKING VOLTAGE DC AT 25°C	RATED VAC 1/ AT 120 CPS	SPRAGUE PART NUMBER
37	56.0	D	20	2.5	250D566X9020S2
38	68.0	D	20	2.5	250D686X9020S2
39	82.0	D	20	2.5	250D826X9020S2
40	100.0	D	20	2.5	250D107X9020S2
41	.0047	A	35	3.0	250D472X9035A2
42	.0056	A	35	3.0	250D562X9035A2
43	.0068	A	35	3.0	250D682X9035A2
44	.0082	A	35	3.0	250D822X9035A2
45	.01	A	35	3.0	250D103X9035A2
46	.012	A	35	3.0	250D123X9035A2
47	.015	A	35	3.0	250D153X9035A2
48	.018	A	35	3.0	250D183X9035A2
49	.022	A	35	3.0	250D223X9035A2
50	.027	A	35	3.0	250D273X9035A2
51	.033	A	35	3.0	250D333X9035A2
52	.039	A	35	3.0	250D393X9035A2
53	.047	A	35	3.0	250D473X9035A2
54	.056	A	35	3.0	250D563X9035A2
55	.068	A	35	3.0	250D683X9035A2
56	.082	A	35	3.0	250D823X9035A2
57	0.1	A	35	3.0	250D104X9035A2
58	0.12	A	35	3.0	250D124X9035A2
59	0.15	A	35	3.0	250D154X9035A2
60	0.18	A	35	3.0	250D184X9035A2
61	0.22	A	35	3.0	250D224X9035A2
62	0.27	A	35	3.0	250D274X9035A2
63	0.33	A	35	3.0	250D334X9035A2
64	0.39	A	35	3.0	250D394X9035A2
65	0.47	A	35	3.0	250D474X9035A2
66	0.56	A	35	3.0	250D564X9035A2
67	0.68	A	35	3.0	250D684X9035A2
68	0.82	A	35	3.0	250D824X9035A2
69	1.0	A	35	3.0	250D105X9035A2
70	1.2	B	35	3.0	250D125X9035B2
71	1.5	B	35	3.0	250D155X9035B2
72	1.8	B	35	3.0	250D185X9035B2

FOR INFORMATION ONLY
 CLASS B RELEASE TDR No. 00165 DATE 12/12/62

Ⓧ REPLACED BY REV E WITH CHANGES

1/ BIAS TO PREVENT VOLTAGE REVERSAL. PEAK AC INCLUDING SURGES + DC NOT TO EXCEED DC RATINGS AT 25°C.

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	MIT INSTRUMENTATION LAB
TOLERANCES ON	CAMBRIDGE, MASS.
FRACTIONS DECIMALS ANGLES	DWG. NO. CONTRACT
± ± ±	DRAWN Ray Wheeler DATE 23 Nov 62
DO NOT SCALE THIS DRAWING	CHECKED J. Marmorek 4 DEC 62
MATERIAL	APPROVAL R.C. Hall 11 Dec 62
HEAT TREATMENT	NASA APPROVAL W.J. Rhee 12-12-62
FINAL FINISH	MIT APPROVAL W.J. Rhee 12/12/62
NEXT ASSY USED ON	
APPLICATION	

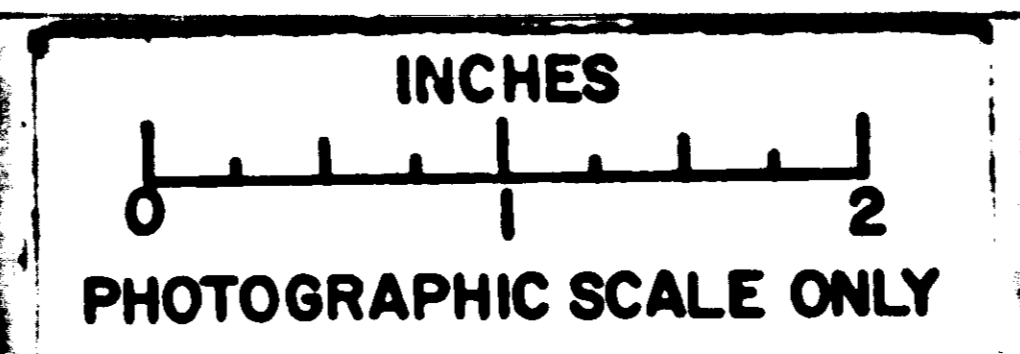
LIST OF MATERIALS

MANNED SPACECRAFT CENTER
HOUSTON, TEXAS

CAPACITOR, FIXED, TANTALUM
SPECIFICATION CONTROL DRAWING

CODE IDENT NO. SIZE NASA DRAWING NO.
C C 1006755

SCALE NONE WT SHEET 2 OF 3



1006755

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1006755		REVISIONS	
SYM	DESCRIPTION	DATE	APPROVAL
D	OBSOLETE PER TDRR 01161	8/26/62	CP

DASH NO.	CAPACITANCE UF ±10%	CASE STYLE	RATED WORKING VOLTAGE DC AT 25°C	RATED VAC 1/ AT 120 CPS	SPRAGUE PART NUMBER
73	2.2	B	35	3.0	250D225X9035B2
74	2.7	B	35	3.0	250D275X9035B2
75	3.3	B	35	3.0	250D335X9035B2
76	3.9	B	35	3.0	250D395X9035B2
77	4.7	B	35	3.0	250D475X9035B2
78	5.6	B	35	3.0	250D565X9035B2
79	6.8	B	35	3.0	250D685X9035B2
80	8.2	C	35	3.0	250D825X9035R2
81	10.0	C	35	3.0	250D106X9035R2
82	12.0	C	35	3.0	250D126X9035R2
83	15.0	C	35	3.0	250D156X9035R2
84	18.0	C	35	3.0	250D186X9035R2
85	22.0	C	35	3.0	250D226X9035R2
86	27.0	D	35	3.0	250D276X9035S2
87	33.0	D	35	3.0	250D336X9035S2
88	39.0	D	35	3.0	250D396X9035S2
89	47.0	D	35	3.0	250D476X9035S2

FOR INFORMATION ONLY

CLASS B RELEASE TDR No. 00165 DATE 12/14/62

1/ BIAS TO PREVENT VOLTAGE REVERSAL. PEAK AC INCLUDING SURGES + DC NOT TO EXCEED DC RATINGS AT 25°C.

REV D OBSOLETE, THIS SHEET ONLY

QTY REQD	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	FIND NO.
		LIST OF MATERIALS	
MIT INSTRUMENTATION LAB CAMBRIDGE, MASS.		MANNED SPACECRAFT CENTER HOUSTON, TEXAS	
DRAWN <i>anybody</i> DATE 2/28/62 CHECKED <i>Bob Hall</i> 11 Dec 62 APPROVAL <i>Bob Hall</i> 11 Dec 62		CAPACITOR, FIXED, TANTALUM SPECIFICATION CONTROL DRAWING	
HEAT TREATMENT <i>---</i>		NASA APPROVAL <i>W J R</i> 12-12-62	CODE IDENT NO. SIZE C
FINAL FINISH <i>---</i>		MIT APPROVAL <i>W J R</i> 12/12/62	NASA DRAWING NO. 1006755
NEXT ASSY	USED ON	SCALE NONE	WT SHEET 3 OF 3

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
TOLERANCES ON		
FRACTIONS	DECIMALS	ANGLES
±	±	±
DO NOT SCALE THIS DRAWING		
MATERIAL <i>---</i>		
HEAT TREATMENT <i>---</i>		
FINAL FINISH <i>---</i>		
APPLICATION		

