

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 THERETO.

NOTES:

1. GENERAL REQUIREMENTS:

- A. UNITS SHALL MEET THE APPLICABLE REQUIREMENTS OF MIL-R-93 CHARACTERISTIC C; EXCEPT AS AND IN ADDITION TO THE REQUIREMENTS SPECIFIED HEREIN.
- B. RESISTANCE VALUES: SEE TABLE.
- C. RESISTANCE TOLERANCE: SEE TABLE.
- D. POWER RATING: 1/10 WATT AT +125°C.
- E. TEMPERATURE COEFFICIENT: ±15 PPM/°C OVER OPERATING TEMPERATURE RANGE, EXCEPT FOR VALUES BELOW 20 OHMS WHICH SHALL BE ±.006% MAXIMUM.
- F. MAXIMUM VOLTAGE RATING: 150 VOLTS.
- G. STABILITY: 100 PPM/YEAR AT +25°C AT 1/2 RATED POWER.
- H. TEMPERATURE RANGE: MINUS 65°C TO PLUS 125°C.

2. CONSTRUCTION REQUIREMENTS:

- A. LEADS: UNITS SHALL HAVE WELDABLE GRADE A NICKEL LEADS PER ND PS1015400.  
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 PLANE, THROUGH 90° IN ONE DIRECTION, THEN BACK 180° TO THE OPPOSITE DIRECTION AND 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.
- B. MARKING: MARK UNITS PER MIL-STD-130 WITH MANUFACTURER'S NAME AND/ OR SYMBOL, TYPE NUMBER, RESISTANCE VALUE AND TOLERANCE.  
MARKING OF UNIT PACKAGES AND EXTERIOR SHIPPING CONTAINERS SHALL INCLUDE NASA NUMBER, DASH NUMBER AND REVISION LETTER.

3. ENVIRONMENTAL REQUIREMENTS:

- A. UNITS SHALL BE CAPABLE OF MEETING THE ENVIRONMENTAL REQUIREMENTS OF ND 1002000.
- 4. BURN IN: 100 HOURS @125°C @1/10 WATT. REJECT ANY PART WHICH CHANGES MORE THAN 0.1% OR CANNOT MEET PURCHASE TOLERANCE.
- 5. SUPPLIER SHALL CONFORM TO THE QUALITY ASSURANCE PROVISIONS OF ND 1015404 CLASS I.
- 6. INTERPRET DRAWING IN ACCORDANCE WITH STANDARDS PRESCRIBED BY MIL-D-70327.
- 7. A. WAIVE AS REQUIRED ALL INFORMATION PRESENTED ON THIS DRAWING EXCEPT LEAD MATERIAL SPEC. & PHYSICAL DIMENSIONS.  
B. UPON SPECIFIC INSTRUCTION BY (TD) TECHNICAL DIRECTIVE PROCURE THIS PART AS CHANGE LETTER C BY ORDERING TO VENDOR CATALOG NO. & SPECIFICATIONS. REFERENCE ND 1002034.  
C. DISREGARD THIS NOTE IN ITS ENTIRETY IF REFERENCE IS MADE TO THIS DRAWING BY OTHER THAN REVISION LETTER C.

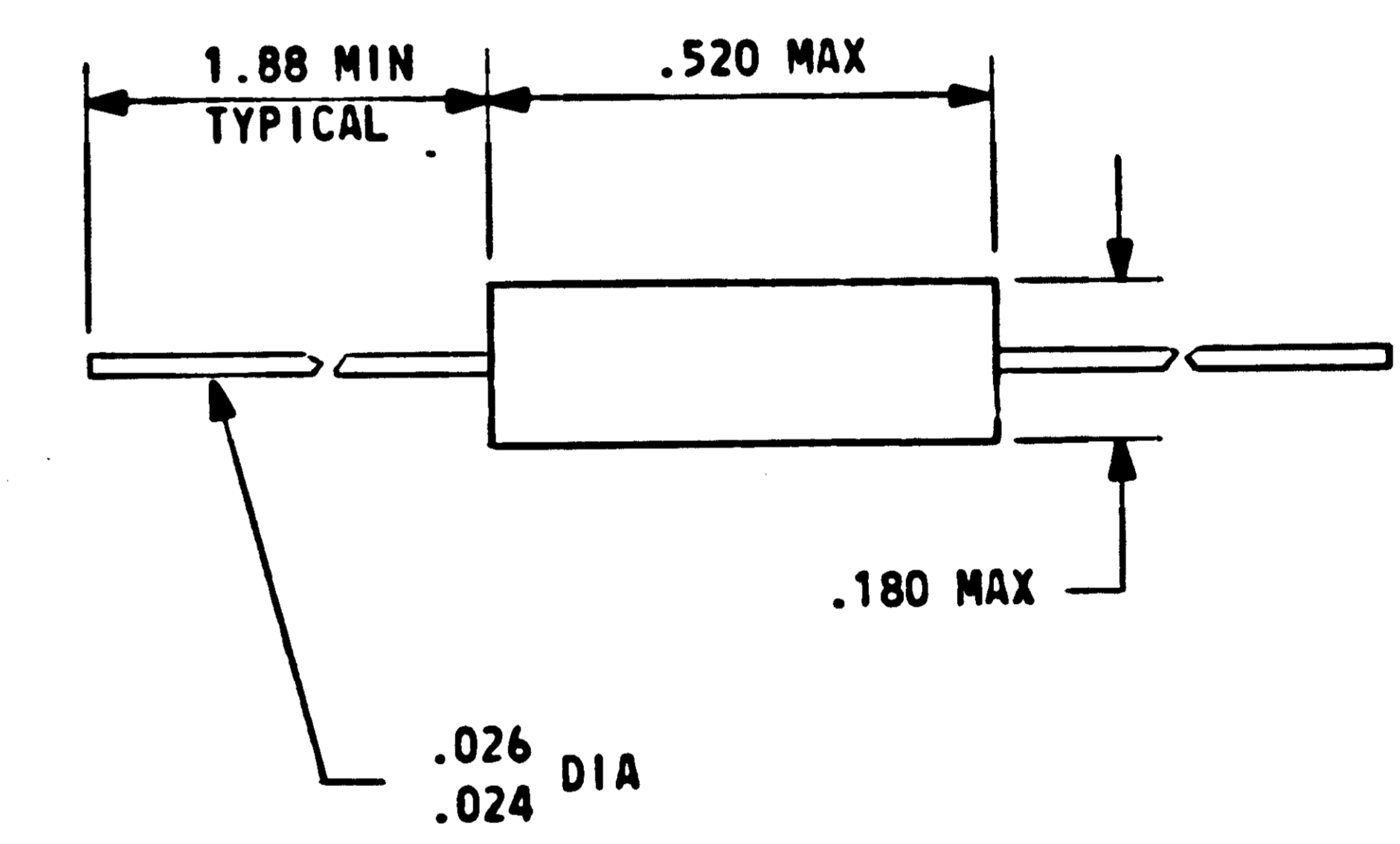
PROCURE ONLY FROM APPROVED SOURCES LISTED ON ND1002034 FOR THIS DRAWING

DASH NO.	NOMINAL RES OHMS	RES TOL	DASH NO.	NOMINAL RES OHMS	RES TOL
1	4,000	±0.1%	53	25,000	±0.1%
2	87,500		54	12,500	
3	88,750		55	8,330	
4	90,000		56	6,250	
5	91,250		57	1	±0.5%
6	92,500		58	2	
7	93,750		59	3	
8	95,000		60	4	
9	96,250		61	5	
10	97,500		62	6	
11	98,750		63	7	
12	100,000		64	8	
13	101,250		65	9	
14	102,500		66	10	
15	103,750		67	11	
16	105,000		68	12	
17	106,250		69	13	
18	107,500		70	14	
19	108,750		71	15	
20	110,000		72	16	
21	111,250		73	17	
22	112,500	±0.1%	74	18	
23	50	±1%	75	19	
24	374		76	82,500	
25	400		77	83,750	
26	600		78	85,000	
27	650		79	86,250	
28	700		80	87,500	
29	750		81	88,750	
30	775		82	90,000	
31	850		83	91,250	
32	925		84	92,500	
33	1,000		85	93,750	
34	1,100		86	95,000	
35	1,200		87	96,250	
36	3,300		88	97,500	±1.0%
37	10,000		89	98,750	
38	22,500		90	100,000	
39	35,000		91	101,250	
40	45,000		92	102,500	
41	67,500		93	103,750	
42	90,000		94	105,000	
43	112,000		95	106,250	
44	134,500		96	107,500	
45	157,000		97	108,750	
46	179,500		98	110,000	
47	202,500		99	111,250	
48	225,000	±1%	100	112,500	
49	39,000		101	113,750	
50	20,000		102	115,000	
51	5,000		103	116,250	
52	25,000		104	117,500	

B 1010377

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
-	TAKEN FROM BUWEP'S DWG C2318927		
A	REVISED PER TDRR		
B	REVISED & REDRAWN PER TDRR 00314	1/30/63	[Signature]
C	ADDED PROCUREMENT NOTE 7 PER TDRR 00433	2-20-63	[Signature]

FOR INFORMATION ONLY  
CLASS B RELEASE TDR No. 00162 DATE 12-12-62



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 [Signature] DATE 1-21-63 CHECKED [Signature] 29 Jan 63 APPROVAL [Signature] 1/30/63		RESISTORS, FIXED, WW, PRECISION SPECIFICATION CONTROL DRAWING	
HEAT TREATMENT NONE		CODE IDENT NO. C	NASA DRAWING NO. 1010377
FINAL FINISH NONE		SCALE NONE	WT
NEXT ASSY	USED ON	SHEET 1 OF 1	
APPLICATION			