

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 NOR 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 CONFERRING ANY RIGHTS OR PERMISSION TO MANUFACTURE, USE, OR SELL ANY PATENTED INVENTION THAT MAY IN ANY WAY BE RELATED THEREBY.

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.

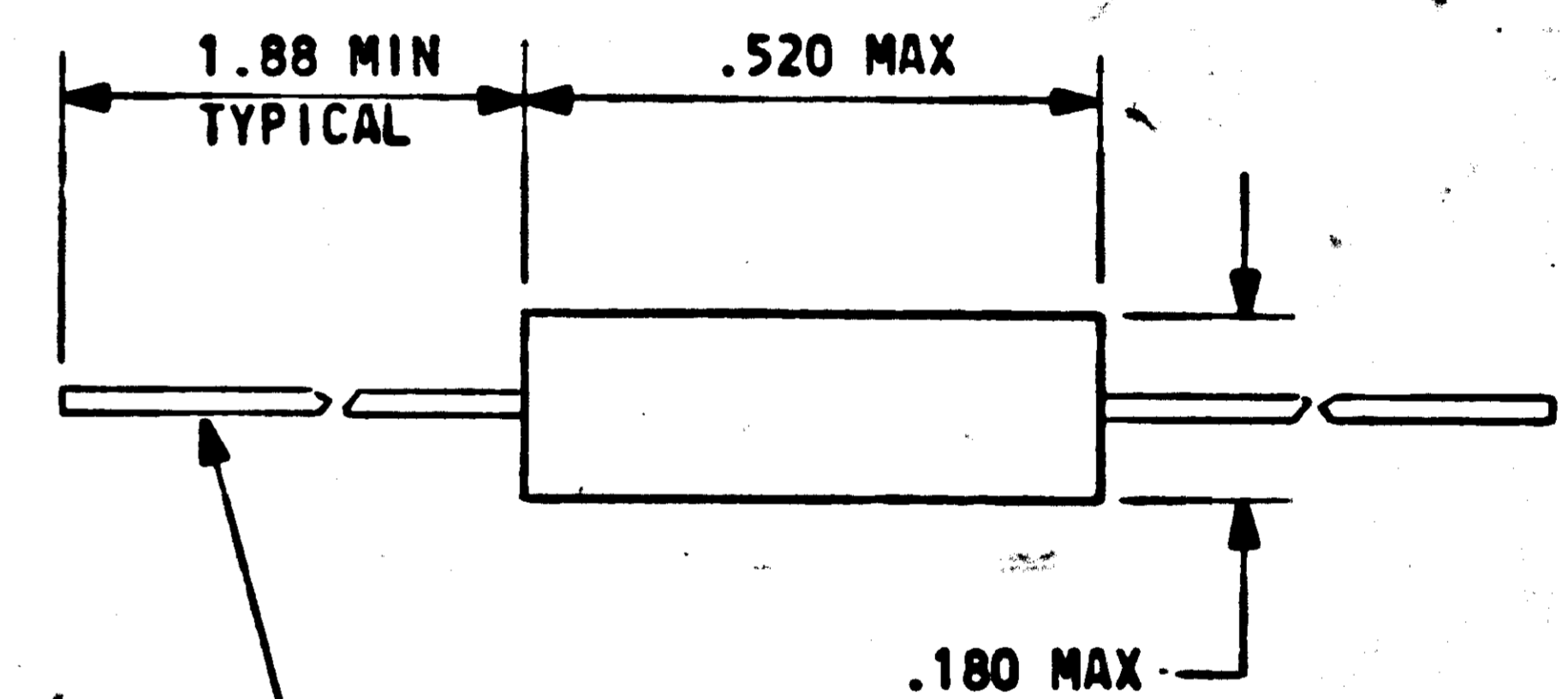
DASH NO.	NOMINAL RES OHMS	RES TOL	DASH NO.	NOMINAL RES OHMS	RES TOL	DASH NO.	NOMINAL RES OHMS	RES TOL
1	4,000	±0.1%	53	25,000	±0.1%	107	100	±1.0%
2	87,500		54	12,500		108	150	
3	88,750		55	8,330		109	7,500	
4	90,000		56	6,250		110	4,700	
5	91,250		57	1	±0.5%	111	91,000	
6	92,500		58	2		112	1 OHM	
7	93,750		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	3,500		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				
			105	16,000				
			106	6,200				

1010377

REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
E	REPLACES REV D WITH CHANGE PER TDRR 00513	6/3/63	WK
F	REVISED PER TDRR 00863	17 Apr 63	WK
G	REVISED PER TDRR 00967	24 Apr 63	WK
H	ADDED SHEET 2 PER TDRR 01271	5-15-63	WK
J	REPLACED BY REV. K WITH CHANGES PER TDRR 02103	7/17/63	JH

FOR INFORMATION ONLY

CLASS B RELEASE TDR No. 00162 DATE 12-12-62

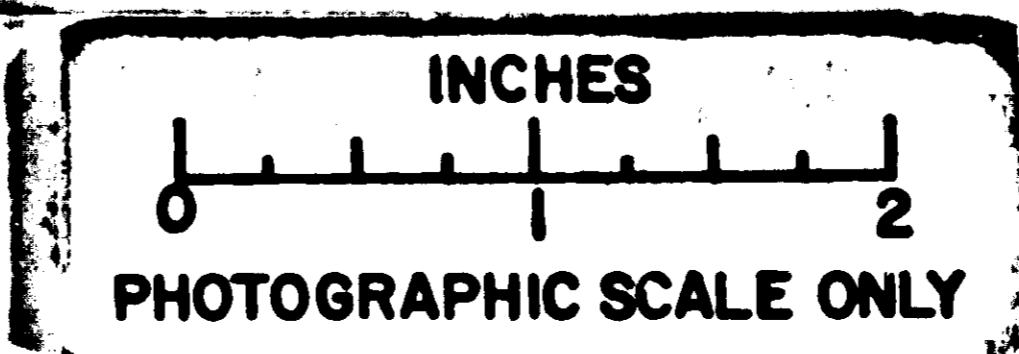


J	J
M	M
SHEET 1	SHEET 2
REVISION STATUS OF SHEETS	

J REPLACED BY REV K WITH CHANGE
 (E) REPLACES REV D WITH CHANGE

PROCURE ONLY FROM APPROVED SOURCES LISTED ON ND1002034 FOR THIS DRAWING

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>W. H. ...</i> DATE: 1-21-63 CHECKED: <i>...</i> DATE: 29 Jan 63 APPROVAL: <i>...</i> DATE: 1/30/63		RESISTORS, FIXED, WW, PRECISION SPECIFICATION CONTROL DRAWING	
HEAT TREATMENT: NONE		CODE IDENT NO.:	NASA DRAWING NO.
FINAL FINISH: NONE		C	1010377
MIT APPROVAL: <i>W. H. ...</i> DATE: 30 Jan 63		SCALE: NONE	WT
APPLICATION		SHEET	1 OF 2



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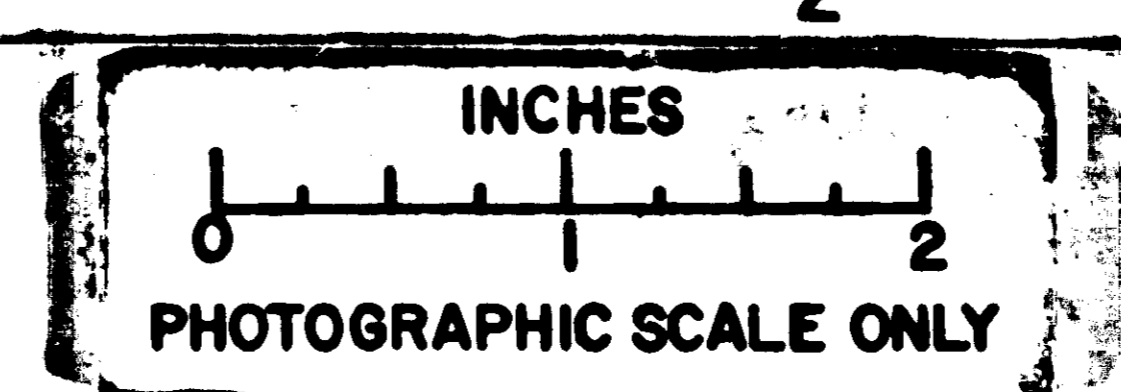
1010377			
REVISIONS			
SYM	DESCRIPTION	DATE	APPROVAL
H	ADDED SHEET 2 PER TDRR 01271	5-15-63	WK
J	REPLACED BY REV K WITH CHANGES PER TDRR 02103	7/1/63	WK

DASH NO.	NOMINAL RES OHMS	RES TOL	DASH NO.	NOMINAL RES OHMS	RES TOL	DASH NO.	NOMINAL RES OHMS	RES TOL
113	15	±0.1%	170	129	±0.1%	227	900	±0.1%
114	17		171	131		228	910	
115	19		172	133		229	920	
116	21		173	135		230	930	
117	23		174	137		231	940	
118	25		175	139		232	950	
119	27		176	141		233	960	
120	29		177	143		234	970	
121	31		178	145		235	980	
122	33		179	147		236	990	
123	35		180	149		237	1000	
124	37		181	151		238	1010	
125	39		182	153		239	1020	
126	41		183	155		240	1030	
127	43		184	157		241	1040	
128	45		185	159		242	1050	
129	47		186	161		243	1060	
130	49		187	163		244	1070	
131	51		188	165		245	1080	
132	53		189	167		246	1090	
133	55		190	169		247	1100	
134	57		191	171		248	1110	
135	59		192	173		249	1120	
136	61		193	175		250	1130	
137	63		194	177		251	1140	
138	65		195	179		252	1150	
139	67		196	181		253	1160	
140	69		197	183		254	1170	
141	71		198	185		255	1180	
142	73		199	187		256	1190	
143	75		200	189		257	1200	
144	77		201	191		258	1210	
145	79		202	193		259	1220	
146	81		203	195		260	1230	
147	83		204	197		261	1240	
148	85		205	199		262	1250	
149	87		206	201		263	1260	
150	89		207	203		264	1270	
151	91		208	205		265	1280	
152	93		209	207		266	1290	
153	95		210	209		267	1300	
154	97		211	211		268	1310	
155	99		212	213		269	1320	
156	101		213	215		270	1330	
157	103		214	217		271	1340	
158	105		215	219		272	1350	
159	107		216	221		273	1360	
160	109		217	223		274	1370	
161	111		218	225		275	1380	
162	113		219	227		276	1390	
163	115		220	229		277	1400	
164	117		221	231				
165	119		222	233				
166	121		223	235				
167	123		224	237				
168	125		225	239				
169	127		226	241				

FOR INFORMATION ONLY
 CLASS B RELEASE TDR No. 01271 DATE 15 May 63

J REPLACED BY REV K WITH CHANGE
 (H) THIS SHEET ADDED

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 <u>George J. [unclear]</u> DATE <u>4/8/63</u>		RESISTORS, FIXED WW, PRECISION SPECIFICATION CONTROL DRAWING	
CHECKED <u>[unclear]</u> DATE <u>5-8-63</u>			
APPROVAL <u>[unclear]</u> DATE <u>5-13-63</u>		CODE IDENT NO.	SIZE
NASA APPROVAL <u>[unclear]</u> DATE <u>5/15/63</u>		C	NASA DRAWING NO. 1010377
MIT APPROVAL <u>WK</u> DATE <u>15 May 63</u>		SCALE NONE	WT
APPLICATION		SHEET 2 OF 2	



1010377