

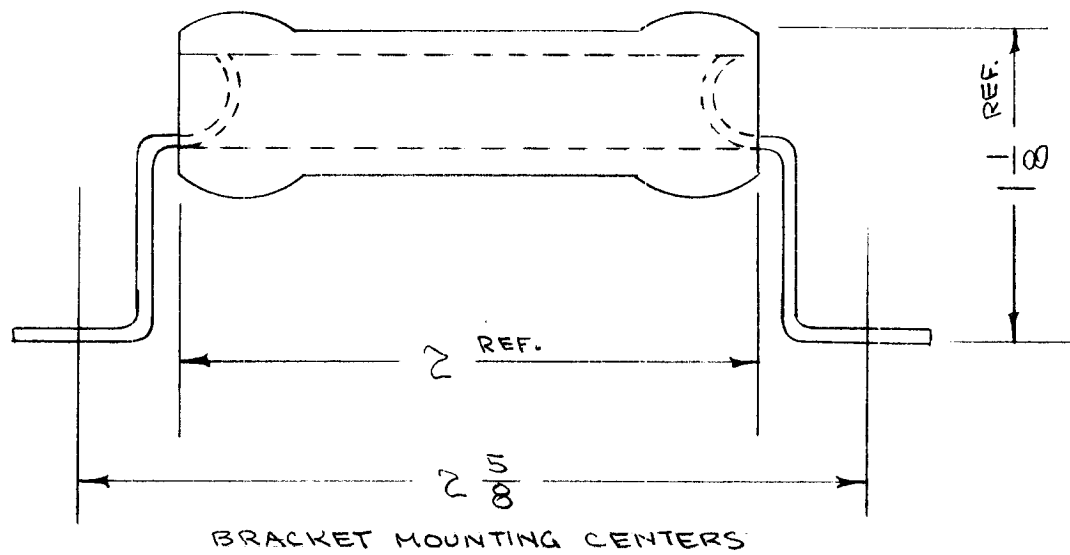
IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

RW-102

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

USED ON

MODEL	PROJECT NO.	ASS'Y. NO.	DATE
FFR	104	A-121	6-27-52



NOTE -  
BRACKETS FURNISHED WITH RESISTOR

REF: WARD LEONARD ELEC. CO. # 25 F 600

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
		#	THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
		STOCK SIZE	RESISTOR, FIXED W. W.	
		MATERIAL	25 WATTS 600 OHMS	
		WEIGHT PER PC.		
		TYPE & TEMPER	C.D.D. 2-12-54	
		HEAT TREAT. SPEC.	DRAWN	ELEC. DES. APP.
		FINISH & SPEC. NO.	CHECKED	MECH. DES. APP.
			FINAL APPROVAL	
			RW-102	

ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
		REDRAWN - NO CHANGE					

TOLERANCES

SCALE #

ALL OTHERS: DEC. DIM. ±  
FRAC. DIM. ±  
ANGULAR DIM. ±

DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED IN THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

# STANDARD DRAWING

RW-105 D

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

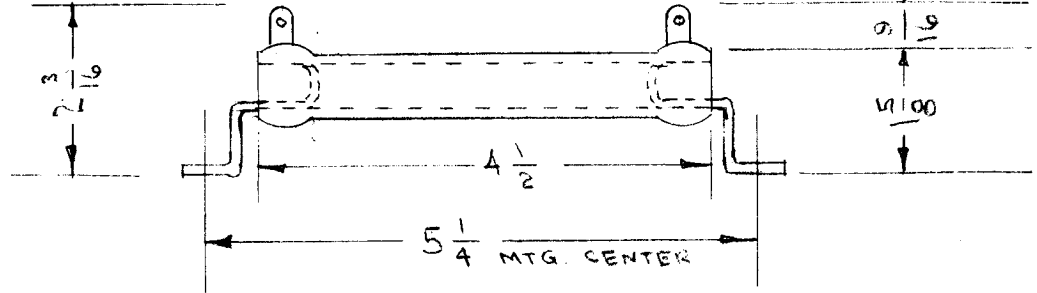
USED ON

MODEL PROJECT NO. ASS'Y. NO. DATE

TMC NO	$\Omega$	CURRENT MA	TMC NO	$\Omega$	CURRENT MA
RW-105-1	1	7070	RW-105-30	12000	65
RW-105-2	2	5000	RW-105-31	12500	63
RW-105-3	3	4020	RW-105-32	15000	58
RW-105-4	4	3535	RW-105-33	20000	50
RW-105-5	5	3160	RW-105-34	25000	45
RW-105-6	10	2235	RW-105-35	30000	41
RW-105-7	25	1415	RW-105-36	25000	38
RW-105-8	50	1000	RW-105-37	40000	35
RW-105-9	75	815	RW-105-38	45000	33
RW-105-10	100	707	RW-105-39	50000	32
RW-105-11	150	575	RW-105-40	75000	23
RW-105-12	200	500	RW-105-41	100000	17
RW-105-13	250	445	RW-105-42	125000	14
RW-105-14	300	408	RW-105-43	150000	12
RW-105-15	400	353	RW-105-44	175000	10
RW-105-16	500	316	RW-105-45	200000	9
RW-105-17	750	258	RW-105-46	225000	8
RW-105-18	800	250	RW-105-47	250000	7
RW-105-19	1000	224	RW-105-48	80000	22
RW-105-20	1500	180	RW-105-49	33	1231 *
RW-105-21	2000	160	RW-105-50	75	815 *
RW-105-22	2500	141			
RW-105-23	3000	130			
RW-105-24	4000	110			
RW-105-25	5000	100			
RW-105-26	6000	91			
RW-105-27	7500	82			
RW-105-28	8000	79			
RW-105-29	10000	71			

S	IT. (49) (48) 22 SPECIAL NOTE S401-32 S401-37 S401-378 SERIES 30W. ADDED. WARD LEONARD REC. SYSTEM	62265	14255	DIV	9/10
D	ADD. TO REF. S401-501	7/7/69	-#	GE	Joe Joe

\* SPECIAL DIM. REQ. BODY LEN. 4" BODY O.D. 3/4 MAX., I.D. 5/16 MIN. TERM. HEIGHT FROM BODY 9/16 MAX.



RESISTORS FURNISHED WITH BRACKETS. TERMINALS SHALL BE HOT TIN DIPPED FOR EASE IN SOLDERING

DIMENSIONS FOR REFERENCE ONLY.

S401-501  
S401-378

REF.: S401-32 TYPE 50F

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP.	
			MAMARONECK, NEW YORK	
			RESISTOR, FIXED WIRE	
			WOUND, 50 WATTS.	
			C.O.D. 10-55Y	ATT.
			DRAWN	ELEC. DES. APP. MECH. DES. APP.
			JAQ 11/5/52	FINAL APPROVAL
			CHECKED	
			HEAT TREAT. SPEC.	
			FINISH & SPEC. NO.	

B	1	RW-105-49 ADDED	8.864	12077	WBS	TP	AS
A	1	RW-105-48 ADDED	11/15/52	1	WBS	TP	AS
ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.

TOLERANCES		SCALE	
ALL OTHERS	DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.	

RW-105 D

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

RELEASED

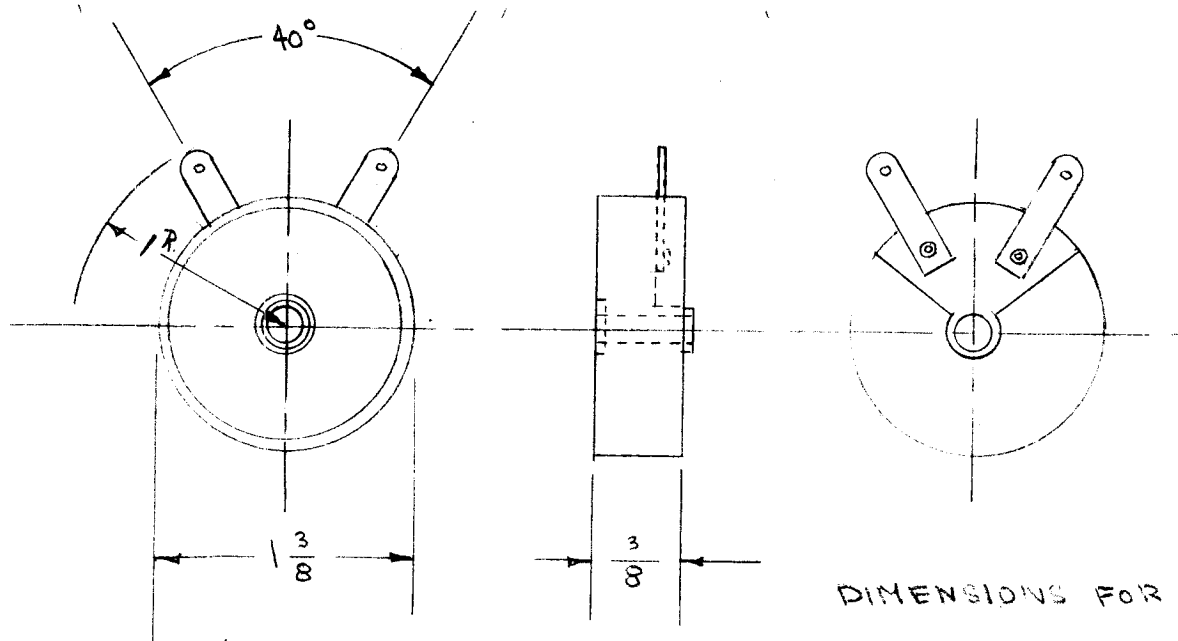
RW-108

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

USED ON

MODEL	PROJECT NO.	ASS'Y. NO.	DATE
LFA	109		

TMC-NO.	OHMS	CURRENT M.A.
RW-108 -1	1	4899
RW-108 -2	3	2828
RW-108 -3	5	2199
RW-108 -4	10	1548
RW-108 -5	15	1265
RW-108 -6	25	999
RW-108 -7	50	699
RW-108 -8	100	489
RW-108 -9	150	400
RW-108 -10	200	346
RW-108 -11	250	309
RW-108 -12	400	245
RW-108 -13	500	219
RW-108 -14	750	178
RW-108 -15	1000	154
RW-108 -16	1250	138
RW-108 -17	1500	126
RW-108 -18	2000	109
RW-108 -19	2500	99
RW-108 -20	3000	89
RW-108 -21	3500	82
RW-108 -22	4000	77



MTG. HOLE DIA. - 0.196  
TERM. HOLE DIA. - 0.089

REF.: WARD LEONARD # 24D.

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
	#		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		STOCK SIZE	RESISTOR, FIXED W.W.	
	#	#	24 WATTS	
		MATERIAL	WEIGHT PER PC.	
		TYPE & TEMPER	C.D.D. 9-22-52	
			DRAWN	ELEC. DES. APP. MECH. DES. APP.
		HEAT TREAT. SPEC.	CHECKED	FINAL APPROVAL
		FINISH & SPEC. NO.		RW-108

ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.

TOLERANCES

SCALE FULL

ALL OTHERS  
DEC. DIM. ±  
FRAC. DIM. ±  
ANGULAR DIM. ±

DRILL, PUNCH, COMMERCIAL STOCK  
SIZES AND MANUFACTURERS  
TOLERANCES ARE NOT INCLUDED.

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

# STANDARD DRAWING

RW-1

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

USED ON

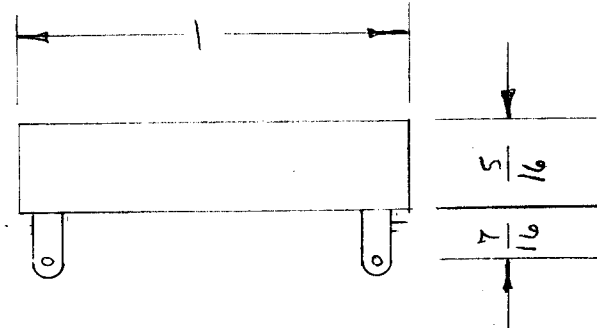
MODEL

PROJECT NO.

ASS'Y. NO.

T.M.C. No.	OHMS	CURRENT M.A.	T.M.C. No.	OHMS	CURRENT M.A.
RW-107-1	1	2230	RW-107-31	750	81
RW-107-2	1.5	1820	RW-107-32	800	79
RW-107-3	2	1580	RW-107-33	900	74
RW-107-4	3	1290	RW-107-34	1000	70
RW-107-5	4	1117	RW-107-35	1100	67
RW-107-6	5	1000	RW-107-36	1200	64
RW-107-7	7.5	811	RW-107-37	1250	63
RW-107-8	10	707	RW-107-38	1500	57
RW-107-9	12	644	RW-107-39	1750	53
RW-107-10	15	577	RW-107-40	2000	50
RW-107-11	20	500	RW-107-41	2250	47
RW-107-12	25	450	RW-107-42	2500	45
RW-107-13	30	408	RW-107-43	3000	40
RW-107-14	35	378	RW-107-44	3500	37
RW-107-15	40	353	RW-107-45	4000	35
RW-107-16	50	316	RW-107-46	4500	33
RW-107-17	75	257	RW-107-47	5000	31
RW-107-18	100	223	RW-107-48	6000	28
RW-107-19	125	200	RW-107-49	7000	26
RW-107-20	150	182	RW-107-50	7500	25
RW-107-21	200	158	RW-107-51	8000	25
RW-107-22	225	148	RW-107-52	9000	23
RW-107-23	250	141	RW-107-53	10000	22
RW-107-24	300	129	-54	.5	
RW-107-25	350	119			
RW-107-26	400	112			
RW-107-27	450	105			
RW-107-28	500	100			
RW-107-29	600	91			
RW-107-30	700	84			

POWER - 5 WATTS  
BORE DIA. - 1/32  
TERM WIDTH - 3/16  
TERM HOLED. 0.089



DIMENSIONS FOR REF. ONLY

REF.: WARD LEONARD CAT. # 5F

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
	#		THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		STOCK SIZE		
	CERAMIC	#	RESISTOR, FIXED	
		MATERIAL	WIRE WOUND, 5 W.	
		WEIGHT PER PC.		
		TYPE & TEMPER	C.P.D. 9-22-52	
			DRAWN	ELEC. DES. APP. MECH. DES. APP.
		HEAT TREAT. SPEC.	MD 9-22-52	
			CHECKED	FINAL APPROVAL
			SUPERCEDES	
			RW-106	RW-107
		FINISH & FILE NO.		

A	1	-54 ADDED	3/11/59					
ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.	

TOLERANCES		SCALE	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.
ALL OTHERS	DEC. DIM. ± FRAC. DIM. ± AN ULAR DIM. ±		

DEC. DIM. ±  
FRAC. DIM. ±  
ANGULAR DIM. ±

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND ANY DEVIATIONS WILL BE CAUSE FOR REJECTION.  
REMOVE ALL BURRS AND SHARP EDGES

TOLERANCES

SCALE:

ISSUE	ITEM	CHANGED FROM
F		RM105-50 ADDED
G		ADDED: 5401-501-32 DELETED: REF WARDL

DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
2-6-69	19199	GE	Joe	FB
7/7/69	4	GE	Joe	Joe

TYPE & TEMPER	HEAT TREAT. SPEC.	DRAWN	CHECKED
#	#	#	#

FINISH & SPEC. NO.	ELEC. DES. APP.	MECH. DES. APP.
#	#	#

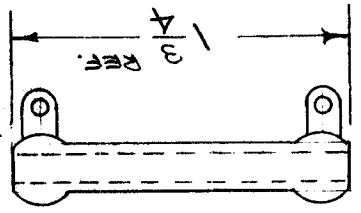
SYMB L	DESCRIPTION	PART NO.	REQ. ITEM
	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK		
	RESISTOR, FIXED, W.M.W.		
	10 WATTS		

THC NO.	RES. CURRENT	T.M.C. NO.	RES. CURRENT
RM-109-1	1	3160	1
-2	3	1825	3
-3	5	1415	5
-4	10	1000	10
-5	15	815	15
-6	25	630	25
-7	50	450	50
-8	75	365	75
-9	100	315	100
-10	125	283	125
-11	150	258	150
-12	175	239	175
-13	200	224	200
-14	250	200	250
-15	300	182	300
-16	350	169	350
-17	400	158	400
-18	450	149	450
-19	500	142	500
-20	600	129	600
-21	750	115	750
-22	800	112	800
-23	900	105	900
-24	1,000	100	1,000
-25	1,250	89	1,250
-26	1,500	81	1,500
-27	1,750	75	1,750

RES. CURRENT	RES. CURRENT	RES. CURRENT	RES. CURRENT
2,000	2,000	2,000	2,000
2,500	2,500	2,500	2,500
3,000	3,000	3,000	3,000
4,000	4,000	4,000	4,000
5,000	5,000	5,000	5,000
7,500	7,500	7,500	7,500
10,000	10,000	10,000	10,000
12,500	12,500	12,500	12,500
15,000	15,000	15,000	15,000
20,000	20,000	20,000	20,000
25,000	25,000	25,000	25,000
30,000	30,000	30,000	30,000
35,000	35,000	35,000	35,000
40,000	40,000	40,000	40,000
45,000	45,000	45,000	45,000
50,000	50,000	50,000	50,000
6,000	6,000	6,000	6,000
4,500	4,500	4,500	4,500
7.5	7.5	7.5	7.5
1.150	1.150	1.150	1.150
1.20	1.20	1.20	1.20
2	2	2	2
2235	2235	2235	2235

5401-501  
5401-32 (OFF)

RESISTOR FURNISHED WITHOUT MOUNTING BRACKETS. TERMINALS SHALL BE HOT TIN DIPPED



516 REF

STANDARD DRAWING

UNIT	M DEL	ASSY. NO.	DATE

RM-109

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

# STANDARD DRAWING

RW-110

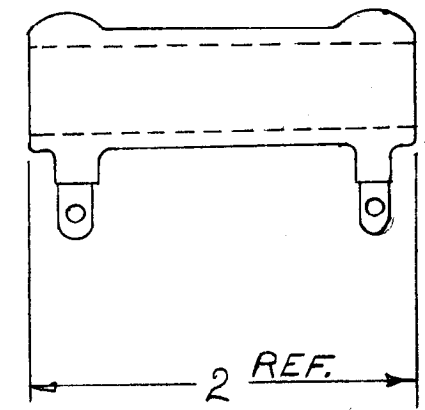
MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

USED ON

MODEL	PROJECT NO.	ASS'Y. NO.	DATE
-------	-------------	------------	------

TMC NO.	RESIST. OHMS	CURRENT M.A.
RW-110-1	1	4,480
RW-110-2	3	2,570
RW-110-3	5	2,000
RW-110-4	10	1410
RW-110-5	15	1150
RW-110-6	25	900
RW-110-7	50	630
RW-110-8	75	510
RW-110-9	100	450
RW-110-10	150	365
RW-110-11	175	340
RW-110-12	200	320
RW-110-13	250	285
RW-110-14	300	258
RW-110-15	350	240
RW-110-16	400	220
RW-110-17	500	200
RW-110-18	750	160
RW-110-19	800	155
RW-110-20	1,000	140
RW-110-21	1,200	130
RW-110-22	1,250	125
RW-110-23	1,500	115
RW-110-24	1,750	107
RW-110-25	2,000	100
RW-110-26	2,500	90
RW-110-27	2,750	85

TMC NO.	RESIST. OHMS	CURRENT M.A.
RW-110-28	3,000	80
RW-110-29	4,000	70
RW-110-30	5,000	65
RW-110-31	6,000	55
RW-110-32	7,500	50
RW-110-33	10,000	40
RW-110-34	12,500	32
RW-110-35	15,000	26
RW-110-36	25,000	16
RW-110-37	35,000	11
RW-110-38	40,000	10
RW-110-39	50,000	8
RW-110-40	60,000*	10.5
RW-110-41	70,000*	10
RW-110-42	75,000*	9.5
RW-110-43	100,000*	8.5
RW-110-44	20,000	32
RW-110-45	7,000	53
RW-110-46	8,000	50
RW-110-47	.5	8300
RW-110-48	3500	75
RW-110-49	.4	2200



- 1 - RESISTOR FURNISHED WITHOUT MOUNTING BRACKETS.
  - 2 - TERMINALS SHALL BE HOT TIN DIPPED FOR EASE OF SOLDERING.
- \* RATED AT 7 WATTS.

S401-501, S401-32 (20F)

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
		2" x 9/16" DIA.	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
		STOCK SIZE	RESISTOR: FIXED, WIRE-WOUND. 20 WATTS	
		MATERIAL		
		WEIGHT PER PC.		
		TYPE & TEMPER	E.T.B. 8/14/52	G.T.O. 8/15/52
		HEAT TREAT. SPEC.	DRAWN	ELEC. DES. APP.
		FINISH & SPEC. NO.	CHECKED	MECH. DES. APP.
			8-14-52	
			FINAL APPROVAL	
			RW-110	F

ISSUE	ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.
E	1	RW110-49 ADDED	7/7/69	4	GE		
			7/14/65	15141	RV		

TOLERANCES	SCALE	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.
ALL OTHERS DEC. DIM. ± FRAC. DIM. ± ANGULAR DIM. ±	FULL	



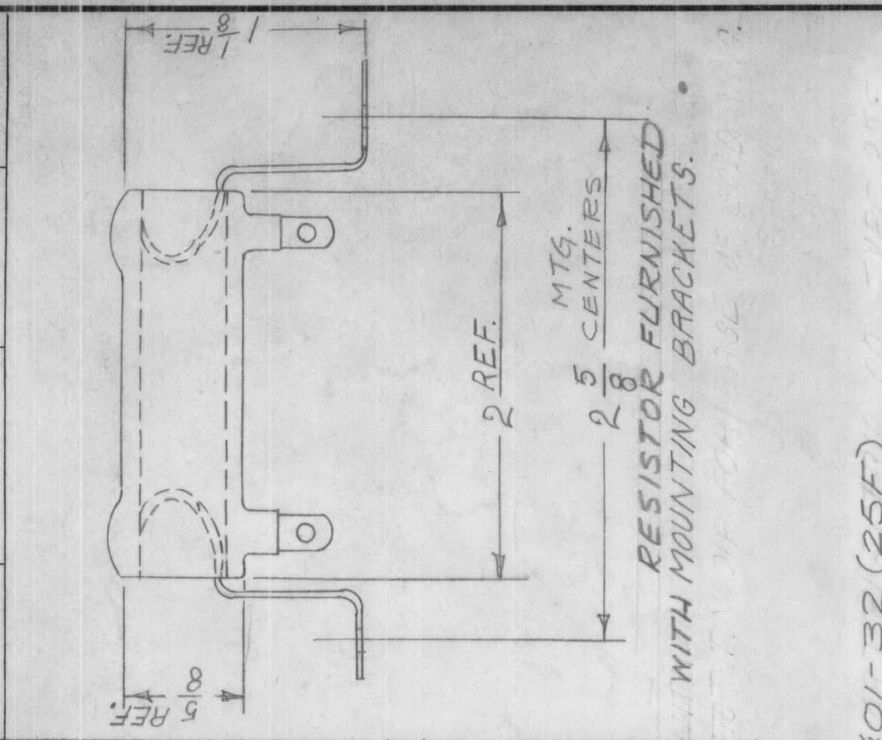
# STANDARD DRAWING

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

AW-111 D

USED ON



RESISTOR FURNISHED WITH MOUNTING BRACKETS.

TMC NO.	RESIST. OHMS	CURRENT M.A.
AW-111-28	4,000	80
AW-111-29	5,000	70
AW-111-30	6,000	65
AW-111-31	7,500	53
AW-111-32	8,500	47
AW-111-33	10,000	40
AW-111-34	12,500	32
AW-111-35	15,000	27
AW-111-36	20,000	20
AW-111-37	25,000	16
AW-111-38	35,000	11
AW-111-39	40,000	10
AW-111-40	50,000	8
AW-111-41	60,000	7
AW-111-42	75,000	5
AW-111-43	100,000	4
AW-111-44	60	600
AW-111-45	33	870
AW-111-46	.5	7100

TMC NO.	RESIST. OHMS	CURRENT M.A.
AW-111-1	1	5000
AW-111-2	3	2840
AW-111-3	5	2235
AW-111-4	10	1580
AW-111-5	15	1290
AW-111-6	25	1000
AW-111-7	50	710
AW-111-8	75	580
AW-111-9	100	500
AW-111-10	150	410
AW-111-11	200	355
AW-111-12	250	315
AW-111-13	300	290
AW-111-14	350	268
AW-111-15	400	250
AW-111-16	450	236
AW-111-17	500	225
AW-111-18	750	180
AW-111-19	850	170
AW-111-20	1,000	160
AW-111-21	1,250	140
AW-111-22	1,500	130
AW-111-23	1,750	120
AW-111-24	2,000	110
AW-111-25	2,500	100
AW-111-26	3,000	90
AW-111-27	3,500	85

REQ. ITEM: 2" x 5/8" DIA  
 PART NO.: S401-501, S401-32 (25F)  
 STOCK SIZE: 1/4  
 DESCRIPTION: THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK  
 RESISTOR - FIXED, WIRE-WOUND, 25 WATTS  
 DRAWN: E.M.B. 8/14/52  
 CHECKED: J.A.D. 8-14-52  
 ELEC. DES. APP.: [Signature]  
 MECH. DES. APP.: [Signature]

REQ. ITEM	PART NO.	STOCK SIZE	WEIGHT PER PC.
2" x 5/8" DIA	S401-501, S401-32 (25F)	1/4	1/4
MATERIAL			
TYPE & TEMPER			
HEAT TREAT. SPEC.			
FINISH & SPEC. NO.			

DEFE. WARDL. ADD S401  
 RW-111-46 ADDED  
 RW-111-45 ADDED  
 RW-111-44 ADDED

ISSUE ITEM	CHANGED FROM	DATE	CN. NO.	DRAFTS CHECKER	ENG. APP.
D		7/7/69			
C		9-21-64	12323	SRG	
B		2-1-62	6291	sh	
A		4/13/58	1	sh	

SCALE FULL  
 TOLERANCES  
 DEC. DIM. ±  
 FRAC. DIM. ±  
 ANGULAR DIM. ±

DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.

FINAL APPROVAL: AW-111 D

IF IT IS FOUND DESIRABLE TO CHANGE ANY TOLERANCE OR OTHER DETAIL SPECIFIED ON THIS DRAWING NOTIFY THE PURCHASER PROMPTLY.

RELEASED

RW-112

A

MAXIMUM ALLOWABLE TOLERANCES HAVE BEEN DETERMINED AND DEVIATIONS WILL BE CAUSE FOR REJECTION. REMOVE ALL BURRS AND SHARP EDGES

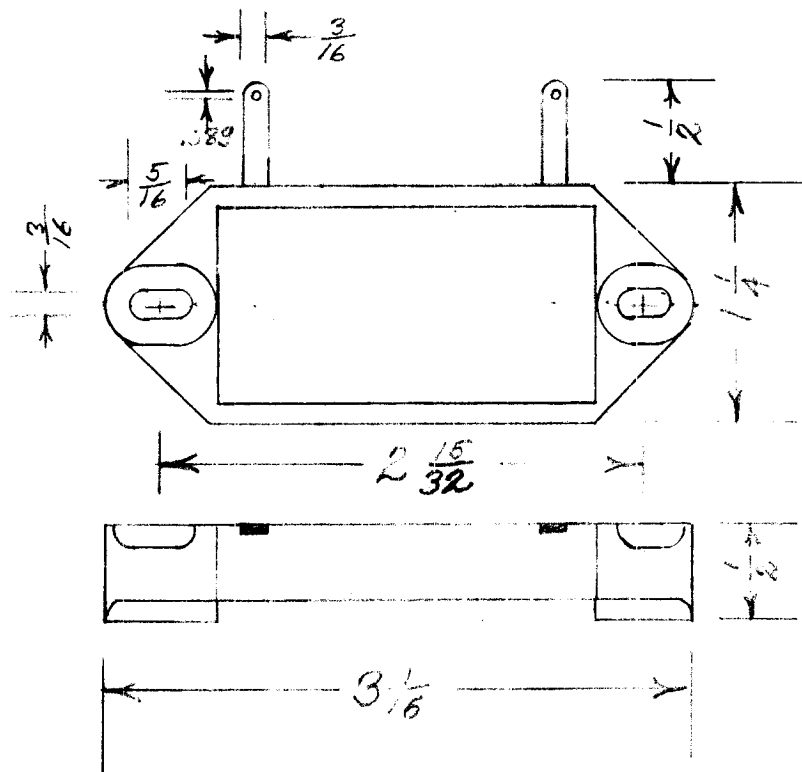
USED ON

MODEL

PROJECT NO.

ASS'Y. NO.

DATE



140 Ohms 25 Watts  
Dem. for Rep. Only

Rep. Ward Leonard Electric Co. Plaquem 25P140

REQ.	ITEM	PART NO.	DESCRIPTION	SYMBOL
			THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
		STOCK SIZE		
			RESISTOR FIXED	
		MATERIAL WEIGHT PER PC.	WIREWOUND 25 W.	
		TYPE & TEMPER		
			DRAWN	ELEC. DES. APP. MECH. DES. APP.
		HEAT TREAT. SPEC.	CHECKED	FINAL APPROVAL
		FINISH & SPEC. NO.		

A	1	RTB	REMOVED	1/15/50	1	110	JAR	AMB
ISSUE	ITEM	CHANGED FROM		DATE	CN. NO.	DRAFTS	CHECKER	ENG. APP.

TOLERANCES			SCALE			
ALL OTHERS	DEC. DIM. ±	FRAC. DIM. ±	ANGULAR DIM. ±	DRILL, PUNCH, COMMERCIAL STOCK SIZES AND MANUFACTURERS TOLERANCES ARE NOT INCLUDED.		



# STANDARD DRAWING

REQ. PER UNIT

USED ON

MODEL

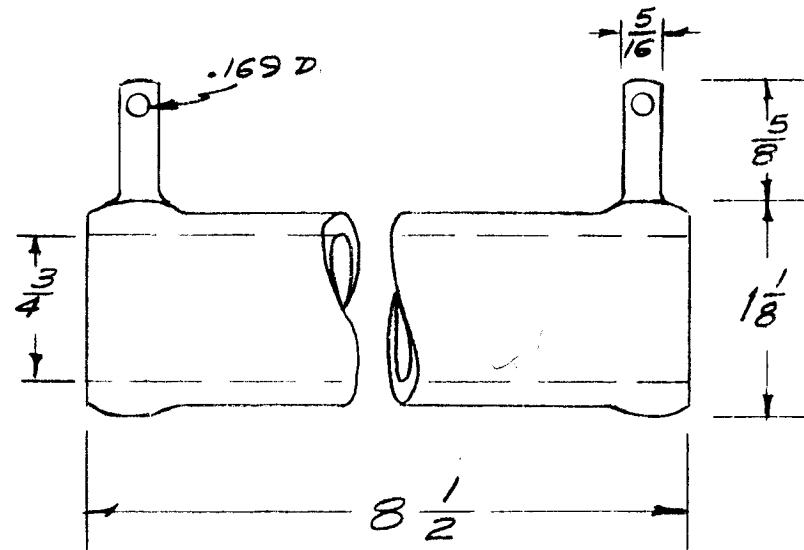
ASS'Y. NO.

DATE

RW-117

B

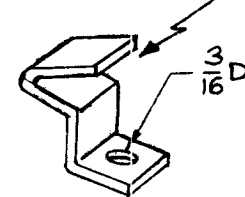
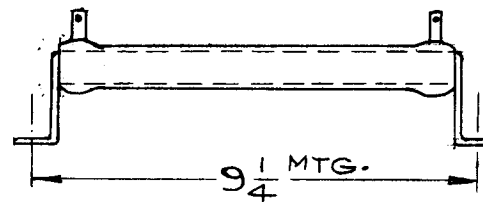
TMC NUMBER	RESISTANCE OHMS	CURRENT M.A.	TMC NUMBER	RESISTANCE OHMS	CURRENT M.A.
RW-117-1	1	12650	RW-117-26	7500	116
RW-117-2	2	8940	RW-117-27	10000	126
RW-117-3	3	7300	RW-117-28	12500	113
RW-117-4	4	6320	RW-117-29	15000	105
RW-117-5	5	5650	RW-117-30	20000	90
RW-117-6	10	4000	RW-117-31	25000	80
RW-117-7	15	3265	RW-117-32	30000	73
RW-117-8	25	2525	RW-117-33	35000	68
RW-117-9	50	1785	RW-117-34	40000	64
RW-117-10	75	1460	RW-117-35	50000	57
RW-117-11	100	1265	RW-117-36	60000	52
RW-117-12	150	1035	RW-117-37	75000	46
RW-117-13	200	894	RW-117-38	80000	45
RW-117-14	250	800	RW-117-39	90000	42
RW-117-15	500	565	RW-117-40	100000	40
RW-117-16	750	460			
RW-117-17	1000	400			
RW-117-18	1500	326			
RW-117-19	2000	280			
RW-117-20	2500	252			
RW-117-21	3000	230			
RW-117-22	3500	215			
RW-117-23	4000	200			
RW-117-24	4500	185			
RW-117-25	5000	178			



Dim. for Ref.

RESISTANCE TOLERANCE ± 5%

NOTE - RESISTOR TO BE SUPPLIED WITH TWO LOOSE MOUNTING BRACKETS (#815)



Ref - WARD LEONARD TYPE 160F

ISSUE	ITEM	CHANGED FROM	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.
B	2	NOTE ADDED	6 24	25	cy	Jde	OB
	1	PICTORIAL OF RESISTOR & BRACKET ADDED	60	39			OB
A	1	RESISTANCE TOLERANCE ADDED	11/5/58	1	16	cup	AM

REQ. ITEM	PART NO.	DESCRIPTION	SYMBOL
		THE TECHNICAL MATERIEL CORP. MAMARONECK. NEW YORK	
	STOCK SIZE	RESISTOR, FIXED, WIRE WOUND	
	MATERIAL	160 WATTS	
		16 9/23/58	
		Jde	APB
		DRAWN	CHECKED
		HEAT TREAT. SPEC.	FINAL APPR VAL
		FINISH & SPEC. NO.	
		APP. MECH. DES. APP.	
		RW-117	B

REQ. PER UNIT	USED ON			RW-123
	MODEL	ASS'Y. NO.	DATE	
4	AX-413	A-3153		

**SPECIFICATIONS**

TOLERANCE: G = ±2%, 5 OHMS AND ABOVE ONLY  
 J = ±5%, STANDARD  
 K = ±10%

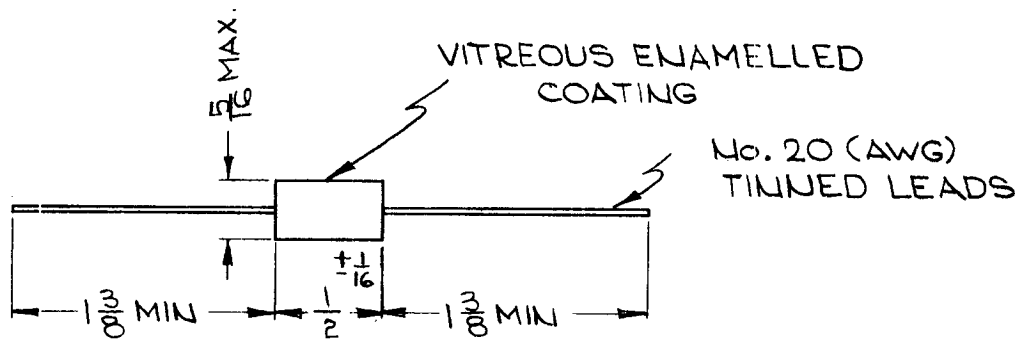
MAXIMUM TEMPERATURE: 340°C. AT 40°C. AMBIENT  
 TEMPERATURE COEFFICIENT OF RESISTANCE:  
 ±.026% PER °C.

CHARACTERISTIC: V

RESISTANCE RANGE: 1 OHM THROUGH 10K OHMS IN  
 STANDARD EIA VALUES.

DERATING: ABOVE 40°C. -0.34% RATED LOAD  
 PER °C.

TERMINAL STRENGTH: 10 LBS. DIRECT PULL  
 UNITS TO MEET THE REQUIREMENTS OF MIL-R-26C.



RW-123 - 103J

BASIC PART NUMBER      RESISTANCE IN OHMS \* AND TOLERANCE

\* TOTAL RESISTANCE IN OHMS IS INDICATED BY A THREE DIGIT NUMBER. THE 1st TWO DIGITS ARE THE FIRST TWO SIGNIFICANT FIGURES. THE LAST DIGIT SPECIFIES THE NUMBER OF ZEROS WHICH FOLLOW THE FIRST TWO FIGURES.

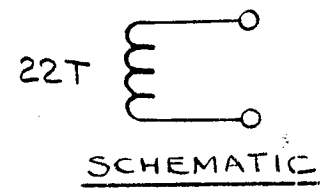
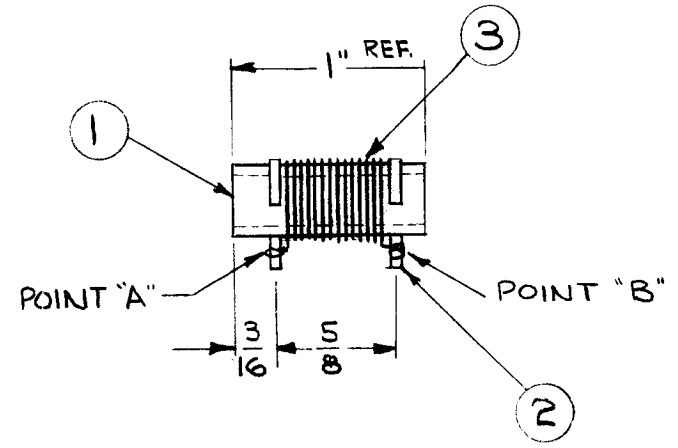
EXAMPLE: 103=10,000 OHMS

REQ.	ITEM	PART NO.	DESCRIPTION				SYMBOL
			Kohn				
STOCK SIZE			THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK				
			RESISTOR, FIXED, WIREWOUND;				
			3 WATTS				
SYM	DESCRIPTION	DATE	CH. NO.	DRAFTS	CHECKER	ENG. APP.	MATERIAL
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES		SCALE DO NOT SCALE					
DECIMALS .X ± .05 .XX ± .01 .XXX ± .005	TOLERANCES	FRACTIONS ± 1/64 ANGLES ± 0° 30'	CODE C	S-401-32 SS-401-49 (242E) S-401-56			TYPE & TEMPER    HEAT TREAT. SPEC.
				11-5-63		11/15/63	FINAL APPROVAL
				RKohn		RKohn	
				FINISH & SPEC. NO.		ELEC. DES. APP.	MECH. DES. APP.
						RW-123	

REQ. PER UNIT	USED ON			RW124	A
	MODEL	ASS'Y. NO.	DATE		
2	BPS-1		3-2-64		

WINDING PROCEDURE

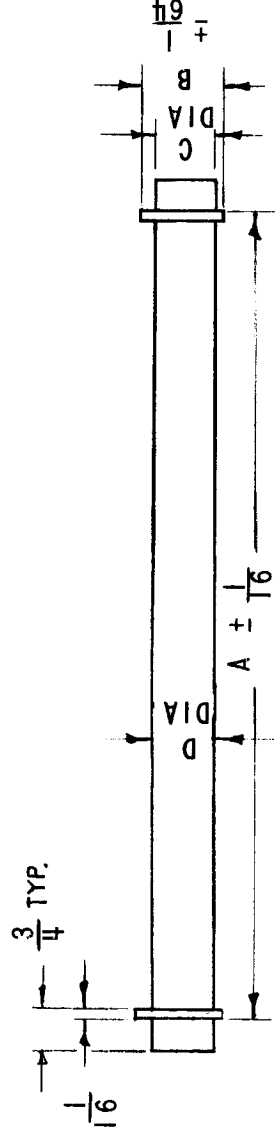
- 1- ASSEMBLE TERMINAL RINGS (ITEM 2) TO COIL FORM (ITEM 1) AS SHOWN IN PICTORIAL.
- 2- SOLDER START OF ITEM 3 TO ITEM 2, POINT "A". WIND 22 CLOSE WOUND TURNS ON ITEM 1. SOLDER FINISH OF ITEM 3 TO ITEM 2, POINT "B", AT END OF 22<sup>ND</sup> TURN.
- 3- APPLY DUCCO CEMENT (ITEM 4) TO WINDING. LET DRY FOR 5 MINUTES.
- 4- MEASURE RESISTANCE OF COIL ON WHEATSTONE BRIDGE. RESISTANCE SHOULD EQUAL  $.064 \Omega \pm .003$



X	5	BS-100	SOLDER, SOFT		
X	4	GL-103	CEMENT, DUCCO		
3'	3	WI-123-24	WIRE, ELECTRICAL MAGNET		
2	2	TE-153-2	TERMINAL, RING TYPE		
1	1	CF-117-1	COIL FORM		
REQ. ITEM	PART NO.		GELLMAN	DESCRIPTION	SYMBOL
— + —			THE TECHNICAL MATERIEL CORP.		
STOCK SIZE			MAMARONECK. NEW YORK		
— + —			RESISTOR ASSEMBLY		
MATERIAL					
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES		SCALE	1:1		
DECIMALS	FRACTIONS	CODE	TYPE & TEMPER		HEAT TREAT. SPEC.
.X ± .05	± 1/64	A	DRAWN		CHECKED
.XX ± .01	ANGLES		ELEC. DES. APP.		MECH. DES. APP.
.XXX ± .005	± 0° 30'		FINISH & SPEC. NO.		
			RW124		A

APPLICATION				REVISIONS				
QTY	MODEL USED ON	ASSY NO.	LTR	DESCRIPTION	DATE	E.M.N.O	CHKD	APPD
3	AP129	A5361	X	EXPERIMENTAL RELEASE	9/15/67			
3	AP129/50	A5361	X1	MFGR CODE WAS S401-49	9/29/67	X1		
3	KIT 347		Ø	ORIG. RELEASE FOR PROD.	10-10-67	Ø		

TMC P/N	MFGR P/N	MFGR/TMC CODE NO.	WATT	NOM Ω	MAX mA	A	B	C	D
RW127-1	17-118-71,000	S401-457	90	71,000	35	6-7/16	1-3/8	1-9/16	1-1/16



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND INCLUDE CHEMICALLY APPLIED OR PLATED FINISHES	REQ'D	ITEM	PART NUMBER	DESCRIPTION	SYM.
DECIMALS .X ± .05 .XX ± .01 .XXX ± .005	F. BUDETTI			LIST OF MATERIAL	
FRACTIONS 1/64	FINAL APPROVED			THE TECHNICAL MATERIEL CORP.	
TOLS. 1/64	DATE 9/15/67			MAMARONECK, NEW YORK	
ANGLES 0°-30°	MECH. DES.			RESISTOR, FIXED, WIREWOUND	
MATERIAL	ELECT. DES.				
FINISH	CHECKED				
	DRAWN				

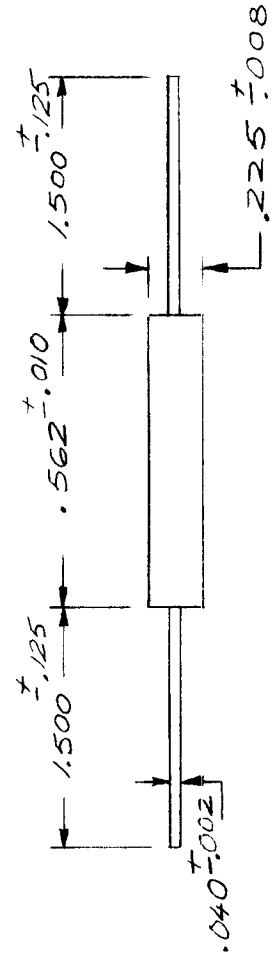
SIZE	CODE IDENT. NO.	DWG NO.	ISSUE
A	82679	RW 127	Ø
SCALE	M/L	SHEET	OF
	M/L		

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APPLICATION			REVISIONS						
QTY	MODEL USED ON	ASS'Y NO.	LTR	DESCRIPTION	DATE	E.M.N.NO	DRAFT	CHKD	APPD
	SPT3K/VHF	AP137	Ø	ORIG RELEASE FOR PROD	4/16/69	-#-	CV		
	SPT3K/VHF	AP138							
	SPT3K/VHF	AX8031							

MFR (TMC CODE NO.): S401-303

TMC P/N	MFR P/N	TOL
RW8002-1	BWH, .24Ω, 2W	5%
-2	BWH, .33Ω, 2W	5%
-3	BWH, 470Ω, 2W	5%



**SPECIFICATIONS**

MIL-R-11: MEETS ALL PERFORMANCE REQUIREMENTS RC32  
 RESISTANCE ELEMENT: WIRE WOUND

REQ'D	ITEM	PART NUMBER	DESCRIPTION	SYM.
LIST OF MATERIAL				
FINAL APPROVAL	<i>[Signature]</i>	9/30/61	THE TECHNICAL MATERIEL CORP. MAMARONECK, NEW YORK	
MECH. DES.	<i>[Signature]</i>	DATE 4/16/69		
ELECT. DES.	<i>[Signature]</i>	DATE 4/16/69		
CHECKED	<i>[Signature]</i>	DATE 4/16/69		
DRAWN	G. E. WILKINSON	DATE 4/16/69		
S401-303			RESISTOR, FIXED WIREBOUND (2W)	

SIZE	CODE IDENT. NO.	DWG NO.	ISSUE
A	82679	RW 8002	Ø
SCALE		SHEET	OF

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