

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 listed in the issue of the Department of Defense Index of Specifications and Standards (DoDISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATION

DEPARTMENT OF DEFENSE

MIL-PRF-22684 - Resistors, Fixed, Film (Insulated), General Specification.

STANDARDS

DEPARTMENT OF DEFENSE

MIL-STD-202 - Test Method Standard, Electronic and Electrical Component Parts.

MIL-STD-1285 - Marking of Electrical and Electronic Parts.

(Unless otherwise indicated, copies of the above specifications, standards, and handbooks are available from the Defense Automated Printing Service, Building 4D (DPM-DoDSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for related association specification, specification sheets, or MS standards), the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 General. The requirements for acquiring the product described herein shall consist of this document and MIL-PRF-22684.

3.2 Interface and physical dimensions. Resistors shall meet the interface and physical dimensions specified on figure 1, as applicable.

3.3 Power rating. The power rating shall be 2 watts based on full load operation at an ambient temperature of 70°C.

3.4 Voltage rating. The maximum continuous working voltage shall not exceed 500 volts.

3.5 Resistance values and resistance tolerances. The minimum and maximum standard resistance values and associated resistance tolerances shall be as listed in table I.

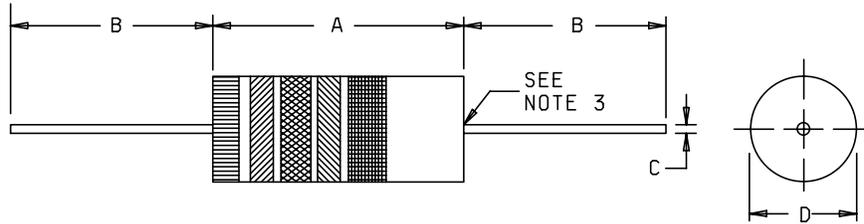
3.6 Terminal type. The terminal type available shall be in accordance with MIL-PRF-22684 and table I.

3.7 Thermal shock. Resistors shall be tested as specified in MIL-PRF-22684 except 150°C +3°C, -0°C shall be used instead of 85°C +3°C, -0°C.

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3.8 Dielectric withstanding voltage. Resistors shall be tested as specified in MIL-PRF-22684. The magnitude of test voltage shall be as follows:

- Atmospheric pressure - 1,000 volts rms.
- Barometric pressure - 500 volts rms.



	DIMENSIONS			
	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	.648	.728	16.46	18.49
B	1.375	1.625	34.92	41.28
C	.043	.047	1.09	1.19
D	.280	.336	7.11	8.53

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only
3. The end of the body shall be that point at which the diameter equals the nearest drill size larger than 250 percent of the nominal lead diameter. The leads shall be solderable to within .125 inch (3.18 mm) of the resistor body.

FIGURE 1. Configuration and dimensions.

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Table I. Part Number Designation.

Type designation	Nominal total resistance value	Resistance tolerance (percent)	Terminal	Dash No.	Type designation	Nominal total resistance value	Resistance tolerance (percent)	Terminal	Dash No.
	Ohms					Ohms			
RL42S100GTX	10	G	S	1001	RL42S121GTX	120	G	S	1053
RL42S100JTX	10	J	S	1002	RL42S121JTX	120	J	S	1054
RL42S110GTX	11	G	S	1003	RL42S131GTX	130	G	S	1055
RL42S110JTX	11	J	S	1004	RL42S131JTX	130	J	S	1056
RL42S120GTX	12	G	S	1005	RL42S151GTX	150	G	S	1057
RL42S120JTX	12	J	S	1006	RL42S151JTX	150	J	S	1058
RL42S130GTX	13	G	S	1007	RL42S161GTX	160	G	S	1059
RL42S130JTX	13	J	S	1008	RL42S161JTX	160	J	S	1060
RL42S150GTX	15	G	S	1009	RL42S181GTX	180	G	S	1061
RL42S150JTX	15	J	S	1010	RL42S181JTX	180	J	S	1062
RL42S160GTX	16	G	S	1011	RL42S201GTX	200	G	S	1063
RL42S160JTX	16	J	S	1012	RL42S201JTX	200	J	S	1064
RL42S180GTX	18	G	S	1013	RL42S221GTX	220	G	S	1065
RL42S180JTX	18	J	S	1014	RL42S221JTX	220	J	S	1066
RL42S200GTX	20	G	S	1015	RL42S241GTX	240	G	S	1067
RL42S200JTX	20	J	S	1016	RL42S241JTX	240	J	S	1068
RL42S220GTX	22	G	S	1017	RL42S271GTX	270	G	S	1069
RL42S220JTX	22	J	S	1018	RL42S271JTX	270	J	S	1070
RL42S240GTX	24	G	S	1019	RL42S301GTX	300	G	S	1071
RL42S240JTX	24	J	S	1020	RL42S301JTX	300	J	S	1072
RL42S270GTX	27	G	S	1021	RL42S331GTX	330	G	S	1073
RL42S270JTX	27	J	S	1022	RL42S331JTX	330	J	S	1074
RL42S300GTX	30	G	S	1023	RL42S361GTX	360	G	S	1075
RL42S300JTX	30	J	S	1024	RL42S361JTX	360	J	S	1076
RL42S330GTX	33	G	S	1025	RL42S391GTX	390	G	S	1077
RL42S330JTX	33	J	S	1026	RL42S391JTX	390	J	S	1078
RL42S360GTX	36	G	S	1027	RL42S431GTX	430	G	S	1079
RL42S360JTX	36	J	S	1028	RL42S431JTX	430	J	S	1080
RL42S390GTX	39	G	S	1029	RL42S471GTX	470	G	S	1081
RL42S390JTX	39	J	S	1030	RL42S471JTX	470	J	S	1082
RL42S430GTX	43	G	S	1031	RL42S511GTX	510	G	S	1083
RL42S430JTX	43	J	S	1032	RL42S511JTX	510	J	S	1084
RL42S470GTX	47	G	S	1033	RL42S561GTX	560	G	S	1085
RL42S470JTX	47	J	S	1034	RL42S561JTX	560	J	S	1086
RL42S510GTX	51	G	S	1035	RL42S621GTX	620	G	S	1087
RL42S510JTX	51	J	S	1036	RL42S621JTX	620	J	S	1088
RL42S560GTX	56	G	S	1037	RL42S681GTX	680	G	S	1089
RL42S560JTX	56	J	S	1038	RL42S681JTX	680	J	S	1090
RL42S620GTX	62	G	S	1039	RL42S751GTX	750	G	S	1091
RL42S620JTX	62	J	S	1040	RL42S751JTX	750	J	S	1092
RL42S680GTX	68	G	S	1041	RL42S821GTX	820	G	S	1093
RL42S680JTX	68	J	S	1042	RL42S821JTX	820	J	S	1094
RL42S750GTX	75	G	S	1043	RL42S911GTX	910	G	S	1095
RL42S750JTX	75	J	S	1044	RL42S911JTX	910	J	S	1096
RL42S820GTX	82	G	S	1045	RL42S102GTX	1,000	G	S	1097
RL42S820JTX	82	J	S	1046	RL42S102JTX	1,000	J	S	1098
RL42S910GTX	91	G	S	1047	RL42S112GTX	1,100	G	S	1099
RL42S910JTX	91	J	S	1048	RL42S112JTX	1,100	J	S	1100
RL42S101GTX	100	G	S	1049	RL42S122GTX	1,200	G	S	1101
RL42S101JTX	100	J	S	1050	RL42S122JTX	1,200	J	S	1102
RL42S111GTX	110	G	S	1051	RL42S132GTX	1,300	G	S	1103
RL42S111JTX	110	J	S	1052	RL42S132JTX	1,300	J	S	1104

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Table I. Part number designation - continued.

Type designation	Nominal total resistance value	Resistance tolerance (percent)	Terminal	Dash No.	Type designation	Nominal total resistance value	Resistance tolerance (percent)	Terminal	Dash No.
RL42S152GTX	Ohms 1,500	G	S	1105	RL42S123GTX	Ohms 12,000	G	S	1149
RL42S152JTX	1,500	J	S	1106	RL42S123JTX	12,000	J	S	1150
RL42S162GTX	1,600	G	S	1107	RL42S133GTX	13,000	G	S	1151
RL42S162JTX	1,600	J	S	1108	RL42S133JTX	13,000	J	S	1152
RL42S182GTX	1,800	G	S	1109	RL42S153GTX	15,000	G	S	1153
RL42S182JTX	1,800	J	S	1110	RL42S153JTX	15,000	J	S	1154
RL42S202GTX	2,000	G	S	1111	RL42S163GTX	16,000	G	S	1155
RL42S202JTX	2,000	J	S	1112	RL42S163JTX	16,000	J	S	1156
RL42S222GTX	2,200	G	S	1113	RL42S183GTX	18,000	G	S	1157
RL42S222JTX	2,200	J	S	1114	RL42S183JTX	18,000	J	S	1158
RL42S242GTX	2,400	G	S	1115	RL42S203GTX	20,000	G	S	1159
RL42S242JTX	2,400	J	S	1116	RL42S203JTX	20,000	J	S	1160
RL42S272GTX	2,700	G	S	1117	RL42S223GTX	22,000	G	S	1161
RL42S272JTX	2,700	J	S	1118	RL42S223JTX	22,000	J	S	1162
RL42S302GTX	3,000	G	S	1119	RL42S243GTX	24,000	G	S	1163
RL42S302JTX	3,000	J	S	1120	RL42S243JTX	24,000	J	S	1164
RL42S332GTX	3,300	G	S	1121	RL42S273GTX	27,000	G	S	1165
RL42S332JTX	3,300	J	S	1122	RL42S273JTX	27,000	J	S	1166
RL42S362GTX	3,600	G	S	1123	RL42S303GTX	30,000	G	S	1167
RL42S362JTX	3,600	J	S	1124	RL42S303JTX	30,000	J	S	1168
RL42S392GTX	3,900	G	S	1125	RL42S333GTX	33,000	G	S	1169
RL42S392JTX	3,900	J	S	1126	RL42S333JTX	33,000	J	S	1170
RL42S432GTX	4,300	G	S	1127	RL42S363GTX	36,000	G	S	1171
RL42S432JTX	4,300	J	S	1128	RL42S363JTX	36,000	J	S	1172
RL42S472GTX	4,700	G	S	1129	RL42S393GTX	39,000	G	S	1173
RL42S472JTX	4,700	J	S	1130	RL42S393JTX	39,000	J	S	1174
RL42S512GTX	5,100	G	S	1131	RL42S433GTX	43,000	G	S	1175
RL42S512JTX	5,100	J	S	1132	RL42S433JTX	43,000	J	S	1176
RL42S562GTX	5,600	G	S	1133	RL42S473GTX	47,000	G	S	1177
RL42S562JTX	5,600	J	S	1134	RL42S473JTX	47,000	J	S	1178
RL42S622GTX	6,200	G	S	1135	RL42S513GTX	51,000	G	S	1179
RL42S622JTX	6,200	J	S	1136	RL42S513JTX	51,000	J	S	1180
RL42S682GTX	6,800	G	S	1137	RL42S563GTX	56,000	G	S	1181
RL42S682JTX	6,800	J	S	1138	RL42S563JTX	56,000	J	S	1182
RL42S752GTX	7,500	G	S	1139	RL42S623GTX	62,000	G	S	1183
RL42S752JTX	7,500	J	S	1140	RL42S623JTX	62,000	J	S	1184
RL42S822GTX	8,200	G	S	1141	RL42S683GTX	68,000	G	S	1185
RL42S822JTX	8,200	J	S	1142	RL42S683JTX	68,000	J	S	1186
RL42S912GTX	9,100	G	S	1143	RL42S753GTX	75,000	G	S	1187
RL42S912JTX	9,100	J	S	1144	RL42S753JTX	75,000	J	S	1188
RL42S103GTX	10,000	G	S	1145	RL42S823GTX	82,000	G	S	1189
RL42S103JTX	10,000	J	S	1146	RL42S823JTX	82,000	J	S	1190
RL42S113GTX	11,000	G	S	1147	RL42S913GTX	91,000	G	S	1191
RL42S113JTX	11,000	J	S	1148	RL42S913JTX	91,000	J	S	1192

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Table I. Part number designation - continued.

Type designation	Nominal total resistance value	Resistance tolerance (percent)	Terminal	Dash No.	Type designation	Nominal total resistance value	Resistance tolerance (percent)	Terminal	Dash No.
	Megohms					Megohms			
RL42S104GTX	0.10	G	S	1193	RL42S474GTX	0.47	G	S	1225
RL42S104JTX	0.10	J	S	1194	RL42S474JTX	0.47	J	S	1226
RL42S114GTX	0.11	G	S	1195	RL42S514GTX	0.51	G	S	1227
RL42S114JTX	0.11	J	S	1196	RL42S514JTX	0.51	J	S	1228
RL42S124GTX	0.12	G	S	1197	RL42S564GTX	0.56	G	S	1229
RL42S124JTX	0.12	J	S	1198	RL42S564JTX	0.56	J	S	1230
RL42S134GTX	0.13	G	S	1199	RL42S624GTX	0.62	G	S	1231
RL42S134JTX	0.13	J	S	1200	RL42S624JTX	0.62	J	S	1232
RL42S154GTX	0.15	G	S	1201	RL42S684GTX	0.68	G	S	1233
RL42S154JTX	0.15	J	S	1202	RL42S684JTX	0.68	J	S	1234
RL42S164GTX	0.16	G	S	1203	RL42S754GTX	0.75	G	S	1235
RL42S164JTX	0.16	J	S	1204	RL42S754JTX	0.75	J	S	1236
RL42S184GTX	0.18	G	S	1205	RL42S824GTX	0.82	G	S	1237
RL42S184JTX	0.18	J	S	1206	RL42S824JTX	0.82	J	S	1238
RL42S204GTX	0.20	G	S	1207	RL42S914GTX	0.91	G	S	1239
RL42S204JTX	0.20	J	S	1208	RL42S914JTX	0.91	J	S	1240
RL42S224GTX	0.22	G	S	1209	RL42S105GTX	1.0	G	S	1241
RL42S224JTX	0.22	J	S	1210	RL42S105JTX	1.0	J	S	1242
RL42S244GTX	0.24	G	S	1211	RL42S115GTX	1.1	G	S	1243
RL42S244JTX	0.24	J	S	1212	RL42S115JTX	1.1	J	S	1244
RL42S274GTX	0.27	G	S	1213	RL42S125GTX	1.2	G	S	1245
RL42S274JTX	0.27	J	S	1214	RL42S125JTX	1.2	J	S	1246
RL42S304GTX	0.30	G	S	1215	RL42S135GTX	1.3	G	S	1247
RL42S304JTX	0.30	J	S	1216	RL42S135JTX	1.3	J	S	1248
RL42S334GTX	0.33	G	S	1217	RL42S155GTX	1.5	G	S	1249
RL42S334JTX	0.33	J	S	1218	RL42S155JTX	1.5	J	S	1250
RL42S364GTX	0.36	G	S	1219					
RL42S364JTX	0.36	J	S	1220					
RL42S394GTX	0.39	G	S	1221					
RL42S394JTX	0.39	J	S	1222					
RL42S434GTX	0.43	G	S	1223					
RL42S434JTX	0.43	J	S	1224					

3.9 Insulation resistance. Resistors shall be tested as specified in MIL-PRF-22684 except the insulation resistance shall be not less than 100 megohms.

3.10 Moisture resistance. Resistors shall be tested as specified in MIL-PRF-22684 except the change in resistance shall not exceed 2.0 percent.

3.11 Life. Resistors shall be tested as specified in MIL-PRF-22684 except the change in resistance shall not exceed 3.0 percent.

3.12 Power conditioning. When resistors are tested as specified in 4.2, there shall be no mechanical damage.

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3.13 Marking. At the option of the manufacturer, parts may be marked in accordance with method I of MIL-STD-1285. The PIN, FSCM, date and lot code, resistance value, and tolerance shall be marked on the parts as in the following example:

M22684/	- PIN
08-1239	
12345	- Source code
8401AA	- Date and lot code
910K 2%	- Resistance value and tolerance

If this type marking is used, then the green colored band for TX identification may be omitted. Marking shall remain legible after all tests.

4. VERIFICATION

4.1 Sampling and inspection. Sampling and inspection procedures shall be in accordance with Group A inspection and Group B inspection of MIL-PRF-22684 except power conditioning shall be performed on 100 percent of the product supplied under this specification.

4.2 Power conditioning (see 3.12). Resistors shall be tested in accordance with method 108 of MIL-STD-202. The following details and exceptions shall apply:

- a. Measurement before conditioning: DC resistance measured in accordance with paragraph 3.7 of MIL-PRF-22684.
- b. Conditioning procedures: Each resistor supplied under this specification shall be subjected to power conditioning for a period of 24 hours at 150 percent rated power. Mounting shall be such that 25°C, +10°C, -5°C ambient air can be circulated around the resistors by means of forced air with a velocity not exceeding 500 FPM. The maximum applied voltage shall not exceed 500 V rms.
- c. Measurement after conditioning: After power conditioning, the resistors shall be stabilized at room conditions for a minimum of 2 hours before the dc resistance measurements are made. Resistors that are outside of the tolerance limit and those that have changed more than 0.5 percent due to the conditioning shall be removed from the lot. When the combined quantity removed exceeds 10 percent of the lot, the entire lot shall be rejected. The supplier shall have a complete record available of all test results obtained during power conditioning testing (see ordering data).

4.3 TX identification. Resistors procured to, and meeting all of the criteria specified herein shall bear a green colored band in place of the band "E" in accordance with appendix B to MIL-PRF-22684. The symbol "TX" shall be printed at one of the locations specified below:

- a. Preferred: On the green colored band described above.
- b. On the packing which packaged the items in groups.

In the event the resistor sample fails to meet the requirements of MIL-PRF-22684 and this specification sheet, the manufacturer shall remove the green band from the sample tested and also from all the resistors represented by the sample.

5. PACKAGING

5.1 Packaging. For acquisition purposes the packaging requirements shall be as specified in the contract or purchase order. When actual packaging of materiel 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 that may be helpful, but is not mandatory.)

6.1 Notes The notes specified in MIL-PRF-22684 are applicable to this specification.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, date of this specification, and complete PIN (see 1.2).
- b. Issue of DoDISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2).
- c. Packaging requirements.

6.3 Changes from previous issue. Asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:
Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:
DLA - CC

(Project 5905-1556)

Review activities:
Army - AR, AT, AV, CR4
Navy - AS, CG, MC, OS
Air Force - 19, 99