

INCH-POUND

MIL-PRF-83421/6D

28 April 2010

SUPERSEDING

MIL-PRF-83421/6C

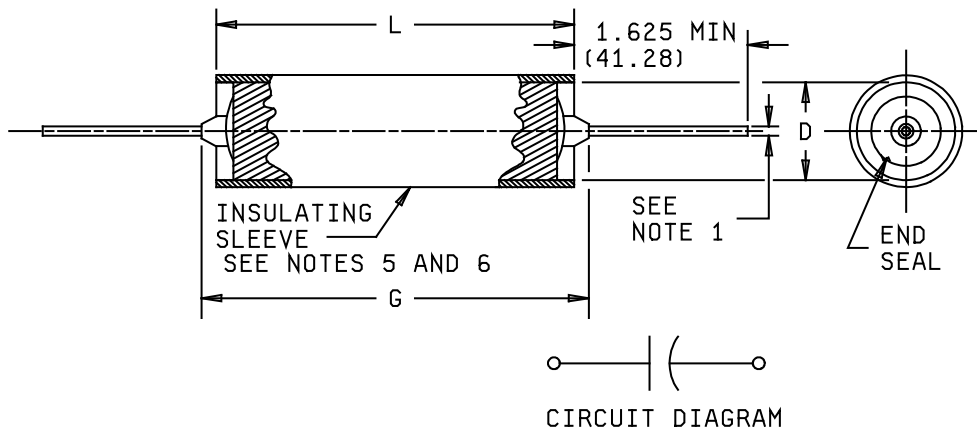
24 January 2006

PERFORMANCE SPECIFICATION SHEET

CAPACITORS, FIXED, METALLIZED PLASTIC FILM DIELECTRIC, DC AND AC,
HERMETICALLY SEALED IN METAL CASES,
ESTABLISHED RELIABILITY
STYLES CRH31, CRH32, CRH33, CRH34, and CRH35

This specification sheet is approved for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein
shall consist of this specification sheet and [MIL-PRF-83421](#).



NOTES:

1. Number 22 AWG wire (.025 inch $\pm$.002 (0.64 mm $\pm$ 0.05)) for case diameters of .312 (7.92 mm) and less. Number 20 AWG wire (.032 inch $\pm$.002 (0.81 mm $\pm$ 0.05)) for case diameters of .400 (10.16 mm) and .500 (12.70 mm). Number 18 AWG wire (.040 inch $\pm$.002 (1.02 mm $\pm$ 0.05)) for case diameters of .562 (14.27 mm) and over.
2. Dimensions are in inches.
3. Metric equivalents are given for general information only and are in parentheses.
4. See [table I](#) for additional dimensions.
5. Insulating sleeve shall extend beyond the capacitor body. Insulating sleeve thickness shall not exceed .005 inch (0.13 mm).
6. Plastic insulating sleeve shall be transparent; marking shall be applied to the capacitor case.
7. Lead length may be a minimum of one inch (25.4 mm) long for use in tape and reel packaging, when specified in the ordering data.

FIGURE 1. Capacitor configuration.

TABLE I. Electrical characteristics, dimensions and dash numbers.

CRH31 - 30 VOLTS (DC RATING)															
Capacitance value (nom) (in μf)	Dimensions (inches with mm in parentheses) <u>1/</u>			DASH NUMBERS <u>2/</u>						AC Ratings (sinusoidal operation from -65° to 85°C) <u>3/</u>					
	L ± 0.030 (0.76)	D $+0.020$ (0.51) -0.010 (0.25)	G, max	Capacitance tolerance value (in %)						0 to 400Hz		4 KHz		40 KHz	
				± 0.25	± 0.5	± 1.0	± 2.0	± 5.0	± 10.0	Volts	Current (A)	Volts	Current (A)	Volts	Current (A)
0.001	.500 (12.70)	.170 (4.32)	.700 (17.78)	1001-	1002-	1003-	1004-	1005-	1006-	22.0	.001	22.0	.001	22.0	.006
0.0012	.500 (12.70)	.170 (4.32)	.700 (17.78)	1007-	1008-	1009-	1010-	1011-	1012-	22.0	.001	22.0	.001	22.0	.007
0.0015	.500 (12.70)	.170 (4.32)	.700 (17.78)	1013-	1014-	1015-	1016-	1017-	1018-	22.0	.001	22.0	.001	22.0	.008
0.0018	.500 (12.70)	.170 (4.32)	.700 (17.78)	1019-	1020-	1021-	1022-	1023-	1024-	22.0	.001	22.0	.001	22.0	.010
0.002	.500 (12.70)	.170 (4.32)	.700 (17.78)	1025-	1026-	1027-	1028-	1029-	1030-	22.0	.001	22.0	.001	22.0	.011
0.0022	.500 (12.70)	.170 (4.32)	.700 (17.78)	1031-	1032-	1033-	1034-	1035-	1036-	22.0	.001	22.0	.001	22.0	.012
0.0027	.500 (12.70)	.170 (4.32)	.700 (17.78)	1037-	1038-	1039-	1040-	1041-	1042-	22.0	.001	22.0	.002	22.0	.015
0.0033	.500 (12.70)	.170 (4.32)	.700 (17.78)	1043-	1044-	1045-	1046-	1047-	1048-	22.0	.001	22.0	.002	22.0	.018
0.0039	.500 (12.70)	.170 (4.32)	.700 (17.78)	1049-	1050-	1051-	1052-	1053-	1054-	22.0	.001	22.0	.002	22.0	.021
0.0047	.500 (12.70)	.170 (4.32)	.700 (17.78)	1055-	1056-	1057-	1058-	1059-	1060-	22.0	.001	22.0	.003	22.0	.026
0.005	.500 (12.70)	.170 (4.32)	.700 (17.78)	1061-	1062-	1063-	1064-	1065-	1066-	22.0	.001	22.0	.003	22.0	.028
0.0056	.500 (12.70)	.170 (4.32)	.700 (17.78)	1067-	1068-	1069-	1070-	1071-	1072-	22.0	.001	22.0	.003	22.0	.031
0.0068	.500 (12.70)	.170 (4.32)	.700 (17.78)	1073-	1074-	1075-	1076-	1077-	1078-	22.0	.001	22.0	.004	22.0	.037
0.0082	.500 (12.70)	.170 (4.32)	.700 (17.78)	1079-	1080-	1081-	1082-	1083-	1084-	22.0	.001	22.0	.005	22.0	.045
0.01	.500 (12.70)	.170 (4.32)	.700 (17.78)	1085-	1086-	1087-	1088-	1089-	1090-	22.0	.001	22.0	.006	22.0	.055
0.012	.500 (12.70)	.170 (4.32)	.700 (17.78)	1091-	1092-	1093-	1094-	1095-	1096-	22.0	.001	22.0	.007	22.0	.066
0.015	.500 (12.70)	.170 (4.32)	.700 (17.78)	1097-	1098-	1099-	1100-	1101-	1102-	22.0	.001	22.0	.008	22.0	.082
0.018	.500 (12.70)	.170 (4.32)	.700 (17.78)	1103-	1104-	1105-	1106-	1107-	1108-	22.0	.001	22.0	.010	22.0	.100
0.02	.500 (12.70)	.170 (4.32)	.700 (17.78)	1109-	1110-	1111-	1112-	1113-	1114-	22.0	.001	22.0	.011	22.0	.110
0.022	.500 (12.70)	.170 (4.32)	.700 (17.78)	1115-	1116-	1117-	1118-	1119-	1120-	22.0	.001	22.0	.012	22.0	.120
0.027	.562 (14.27)	.170 (4.32)	.762 (19.35)	1121-	1122-	1123-	1124-	1125-	1126-	22.0	.002	22.0	.015	22.0	.150
0.033	.562 (14.27)	.170 (4.32)	.762 (19.35)	1127-	1128-	1129-	1130-	1131-	1132-	22.0	.002	22.0	.018	22.0	.180
0.039	.562 (14.27)	.170 (4.32)	.762 (19.35)	1133-	1134-	1135-	1136-	1137-	1138-	22.0	.002	22.0	.021	22.0	.220
0.047	.562 (14.27)	.170 (4.32)	.762 (19.35)	1139-	1140-	1141-	1142-	1143-	1144-	22.0	.003	22.0	.026	22.0	.260
0.05	.562 (14.27)	.170 (4.32)	.762 (19.35)	1145-	1146-	1147-	1148-	1149-	1150-	22.0	.003	22.0	.028	22.0	.280
0.056	.562 (14.27)	.170 (4.32)	.762 (19.35)	1151-	1152-	1153-	1154-	1155-	1156-	22.0	.003	22.0	.031	22.0	.310
0.068	.687 (17.45)	.170 (4.32)	.887 (22.53)	1157-	1158-	1159-	1160-	1161-	1162-	22.0	.004	22.0	.037	22.0	.370
0.082	.687 (17.45)	.170 (4.32)	.887 (22.53)	1163-	1164-	1165-	1166-	1167-	1168-	22.0	.005	22.0	.045	22.0	.450
0.1	.687 (17.45)	.193 (4.90)	.887 (22.53)	1169-	1170-	1171-	1172-	1173-	1174-	22.0	.006	22.0	.055	22.0	.550
0.12	.687 (17.45)	.193 (4.90)	.887 (22.53)	1175-	1176-	1177-	1178-	1179-	1180-	22.0	.007	22.0	.066	22.0	.660
0.15	.562 (14.27)	.235 (5.97)	.762 (19.35)	1181-	1182-	1183-	1184-	1185-	1186-	22.0	.008	22.0	.082	22.0	.830
0.18	.687 (17.45)	.235 (5.97)	.887 (22.53)	1187-	1188-	1189-	1190-	1191-	1192-	22.0	.010	22.0	.100	22.0	1.000
0.20	.687 (17.45)	.235 (5.97)	.887 (22.53)	1193-	1194-	1195-	1196-	1197-	1198-	22.0	.011	22.0	.110	20.0	1.000
0.22	.687 (17.45)	.235 (5.97)	.887 (22.53)	1199-	1200-	1201-	1202-	1203-	1204-	22.0	.012	22.0	.120	18.5	1.020
0.27	.687 (17.45)	.235 (5.97)	.887 (22.53)	1205-	1206-	1207-	1208-	1209-	1210-	22.0	.015	22.0	.150	17.0	1.150
0.33	.687 (17.45)	.235 (5.97)	.887 (22.53)	1211-	1212-	1213-	1214-	1215-	1216-	22.0	.018	22.0	.180	16.0	1.320
0.39	.687 (17.45)	.235 (5.97)	.887 (22.53)	1217-	1218-	1219-	1220-	1221-	1222-	22.0	.021	22.0	.210	15.0	1.460
0.47	.687 (17.45)	.312 (7.92)	.887 (22.53)	1223-	1224-	1225-	1226-	1227-	1228-	22.0	.026	22.0	.260	14.0	1.650

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See footnotes at end of table.

TABLE I. Electrical characteristics, dimensions and dash numbers - Continued.

CRH31 - 30 VOLTS (DC RATING)															
Capacitance value (nom) (in μ f)	Dimensions (inches with mm in parentheses) <u>1/</u>			DASH NUMBERS <u>2/</u>						AC Ratings (sinusoidal operation from -65° to 85°C) <u>3/</u>					
	L $\pm$.030 (.76)	D $\pm$.020 (0.51) -.010 (0.25)	G, max	Capacitance tolerance value (in %)						0 to 400Hz		4 KHz		40 KHz	
				$\pm$ 0.25	$\pm$ 0.5	$\pm$ 1.0	$\pm$ 2.0	$\pm$ 5.0	$\pm$ 10.0	Volts	Current (A)	Volts	Current (A)	Volts	Current (A)
0.50	.687 (17.45)	.312 (7.92)	.887 (22.53)	1229-	1230-	1231-	1232-	1233-	1234-	22.0	.028	22.0	.280	13.5	1.690
0.56	.687 (17.45)	.312 (7.92)	.887 (22.53)	1235-	1236-	1237-	1238-	1239-	1240-	22.0	.031	22.0	.310	12.9	1.810
0.68	.687 (17.45)	.312 (7.92)	.887 (22.53)	1241-	1242-	1243-	1244-	1245-	1246-	22.0	.037	22.0	.370	12.0	2.040
0.82	.813 (20.65)	.312 (7.92)	1.013 (25.73)	1247-	1248-	1249-	1250-	1251-	1252-	22.0	.045	22.0	.450	10.0	2.050
1.0	.813 (20.65)	.312 (7.92)	1.013 (25.73)	1253-	1254-	1255-	1256-	1257-	1258-	22.0	.055	22.0	.550	8.4	2.100
1.2	.813 (20.65)	.312 (7.92)	1.013 (25.73)	1259-	1260-	1261-	1262-	1263-	1264-	22.0	.066	22.0	.660	7.2	2.150
1.5	.813 (20.65)	.400 (10.16)	1.013 (25.73)	1265-	1266-	1267-	1268-	1269-	1270-	22.0	.082	22.0	.830	5.8	2.170
1.8	.813 (20.65)	.400 (10.16)	1.013 (25.73)	1271-	1272-	1273-	1274-	1275-	1276-	22.0	.099	22.0	.990	4.8	2.200
2.0	.813 (20.65)	.400 (10.16)	1.013 (25.73)	1277-	1278-	1279-	1280-	1281-	1282-	22.0	.110	22.0	1.100	4.4	2.200
2.2	.813 (20.65)	.400 (10.16)	1.013 (25.73)	1283-	1284-	1285-	1286-	1287-	1288-	22.0	.120	22.0	1.210	4.0	2.200
2.7	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	1289-	1290-	1291-	1292-	1293-	1294-	22.0	.15	22.0	1.490	3.3	2.200
3.0	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	1295-	1296-	1297-	1298-	1299-	1300-	22.0	.17	22.0	1.650	2.9	2.200
3.3	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	1301-	1302-	1303-	1304-	1305-	1306-	22.0	.18	22.0	1.820	2.7	2.200
3.9	1.375 (34.93)	.400 (10.16)	1.575 (40.01)	1307-	1308-	1309-	1310-	1311-	1312-	22.0	.21	22.0	2.140	2.3	2.200
4.7	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	1313-	1314-	1315-	1316-	1317-	1318-	22.0	.26	18.7	2.200	1.9	2.200
5.0	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	1319-	1320-	1321-	1322-	1323-	1324-	22.0	.28	17.6	2.200	1.8	2.200
5.6	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	1325-	1326-	1327-	1328-	1329-	1330-	22.0	.31	15.7	2.200	1.6	2.200
6.8	1.375 (34.93)	.562 (14.27)	1.575 (40.01)	1331-	1332-	1333-	1334-	1335-	1336-	22.0	.37	13.0	2.200	1.3	2.200
8.0	1.375 (34.93)	.562 (14.27)	1.575 (40.01)	1337-	1338-	1339-	1340-	1341-	1342-	22.0	.44	11.0	2.200	1.1	2.200
8.2	1.375 (34.93)	.562 (14.27)	1.575 (40.01)	1343-	1344-	1345-	1346-	1347-	1348-	22.0	.45	10.7	2.200	1.1	2.200
10.0	1.375 (34.93)	.562 (14.27)	1.575 (40.01)	1349-	1350-	1351-	1352-	1353-	1354-	22.0	.55	8.8	2.200	.88	2.200
12.0	1.875 (47.63)	.562 (14.27)	2.075 (52.71)	1355-	1356-	1357-	1358-	1359-	1360-	22.0	.66	7.3	2.200	.73	2.200
15.0	1.875 (47.63)	.562 (14.27)	2.075 (52.71)	1361-	1362-	1363-	1364-	1365-	1366-	22.0	.83	5.9	2.200	.59	2.200
20.0	1.875 (47.63)	.670 (17.02)	2.075 (52.71)	1367-	1368-	1369-	1370-	1371-	1372-	22.0	1.10	4.4	2.200	.44	2.200
22.0	1.875 (47.63)	.670 (17.02)	2.075 (52.71)	1373-	1374-	1375-	1376-	1377-	1378-	22.0	1.21	4.0	2.200	.40	2.200
CRH32 - 50 VOLTS (DC RATING)															
0.001	.500 (12.70)	.170 (4.32)	.700 (17.78)	2001-	2002-	2003-	2004-	2005-	2006-	36.0	.001	36.0	.001	36.0	.009
0.0012	.500 (12.70)	.170 (4.32)	.700 (17.78)	2007-	2008-	2009-	2010-	2011-	2012-	36.0	.001	36.0	.001	36.0	.011
0.0015	.500 (12.70)	.170 (4.32)	.700 (17.78)	2013-	2014-	2015-	2016-	2017-	2018-	36.0	.001	36.0	.001	36.0	.013
0.0018	.500 (12.70)	.170 (4.32)	.700 (17.78)	2019-	2020-	2021-	2022-	2023-	2024-	36.0	.001	36.0	.002	36.0	.016
0.002	.500 (12.70)	.170 (4.32)	.700 (17.78)	2025-	2026-	2027-	2028-	2029-	2030-	36.0	.001	36.0	.002	36.0	.018
0.0022	.500 (12.70)	.170 (4.32)	.700 (17.78)	2031-	2032-	2033-	2034-	2035-	2036-	36.0	.001	36.0	.002	36.0	.020
0.0027	.500 (12.70)	.170 (4.32)	.700 (17.78)	2037-	2038-	2039-	2040-	2041-	2042-	36.0	.001	36.0	.002	36.0	.024
0.0033	.500 (12.70)	.170 (4.32)	.700 (17.78)	2043-	2044-	2045-	2046-	2047-	2048-	36.0	.001	36.0	.003	36.0	.030
0.0039	.500 (12.70)	.170 (4.32)	.700 (17.78)	2049-	2050-	2051-	2052-	2053-	2054-	36.0	.001	36.0	.004	36.0	.035
0.0047	.500 (12.70)	.170 (4.32)	.700 (17.78)	2055-	2056-	2057-	2058-	2059-	2060-	36.0	.001	36.0	.004	36.0	.042

See footnotes at end of table.

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TABLE I. Electrical characteristics, dimensions and dash numbers - Continued.

CRH32 - 50 VOLTS (DC RATING)															
Capacitance value (nom) (in μf)	Dimensions (inches with mm in parentheses) <u>1/</u>			DASH NUMBERS <u>2/</u>						AC Ratings (sinusoidal operation from -65° to 85°C) <u>3/</u>					
	L $\pm$.030 (.76)	D $\pm$.020 (0.51) -.010 (0.25)	G, max	Capacitance tolerance value (in %)						0 to 400Hz		4 KHz		40 KHz	
				$\pm$ 0.25	$\pm$ 0.5	$\pm$ 1.0	$\pm$ 2.0	$\pm$ 5.0	$\pm$ 10.0	Volts	Current (A)	Volts	Current (A)	Volts	Current (A)
0.005	.500 (12.70)	.170 (4.32)	.700 (17.78)	2061-	2062-	2063-	2064-	2065-	2066-	36.0	.001	36.0	.005	36.0	.045
0.0056	.500 (12.70)	.170 (4.32)	.700 (17.78)	2067-	2068-	2069-	2070-	2071-	2072-	36.0	.001	36.0	.005	36.0	.050
0.0068	.500 (12.70)	.170 (4.32)	.700 (17.78)	2073-	2074-	2075-	2076-	2077-	2078-	36.0	.001	36.0	.006	36.0	.061
0.0082	.562 (14.27)	.170 (4.32)	.762 (19.35)	2079-	2080-	2081-	2082-	2083-	2084-	36.0	.001	36.0	.007	36.0	.074
0.01	.562 (14.27)	.170 (4.32)	.762 (19.35)	2085-	2086-	2087-	2088-	2089-	2090-	36.0	.001	36.0	.009	36.0	.090
0.012	.562 (14.27)	.170 (4.32)	.762 (19.35)	2091-	2092-	2093-	2094-	2095-	2096-	36.0	.001	36.0	.011	36.0	.110
0.015	.562 (14.27)	.170 (4.32)	.762 (19.35)	2097-	2098-	2099-	2100-	2101-	2102-	36.0	.001	36.0	.013	36.0	.140
0.018	.562 (14.27)	.193 (4.90)	.762 (19.35)	2103-	2104-	2105-	2106-	2107-	2108-	36.0	.002	36.0	.016	36.0	.160
0.02	.562 (14.27)	.193 (4.90)	.762 (19.35)	2109-	2110-	2111-	2112-	2113-	2114-	36.0	.002	36.0	.018	36.0	.180
0.022	.562 (14.27)	.193 (4.90)	.762 (19.35)	2115-	2116-	2117-	2118-	2119-	2120-	36.0	.002	36.0	.020	36.0	.200
0.027	.562 (14.27)	.193 (4.90)	.762 (19.35)	2121-	2122-	2123-	2124-	2125-	2126-	36.0	.002	36.0	.024	36.0	.240
0.033	.562 (14.27)	.193 (4.90)	.762 (19.35)	2127-	2128-	2129-	2130-	2131-	2132-	36.0	.003	36.0	.030	36.0	.300
0.039	.687 (17.45)	.170 (4.32)	.887 (22.53)	2133-	2134-	2135-	2136-	2137-	2138-	36.0	.004	36.0	.035	36.0	.350
0.047	.687 (17.45)	.170 (4.32)	.887 (22.53)	2139-	2140-	2141-	2142-	2143-	2144-	36.0	.004	36.0	.042	36.0	.420
0.05	.687 (17.45)	.170 (4.32)	.887 (22.53)	2145-	2146-	2147-	2148-	2149-	2150-	36.0	.005	36.0	.045	36.0	.450
0.056	.687 (17.45)	.193 (4.90)	.887 (22.53)	2151-	2152-	2153-	2154-	2155-	2156-	36.0	.005	36.0	.050	36.0	.500
0.068	.687 (17.45)	.193 (4.90)	.887 (22.53)	2157-	2158-	2159-	2160-	2161-	2162-	36.0	.006	36.0	.061	34.0	.580
0.082	.813 (20.65)	.193 (4.90)	1.013 (25.73)	2163-	2164-	2165-	2166-	2167-	2168-	36.0	.007	36.0	.074	32.0	.660
0.1	.813 (20.65)	.193 (4.90)	1.013 (25.73)	2169-	2170-	2171-	2172-	2173-	2174-	36.0	.009	36.0	.090	30.0	.750
0.12	.687 (17.45)	.235 (5.97)	.887 (22.53)	2175-	2176-	2177-	2178-	2179-	2180-	36.0	.011	36.0	.110	30.0	.900
0.15	.687 (17.45)	.235 (5.97)	.887 (22.53)	2181-	2182-	2183-	2184-	2185-	2186-	36.0	.013	36.0	.140	26.0	.980
0.18	.813 (20.65)	.235 (5.97)	1.013 (25.73)	2187-	2188-	2189-	2190-	2191-	2192-	36.0	.016	36.0	.160	25.0	1.130
0.20	.813 (20.65)	.235 (5.97)	1.013 (25.73)	2193-	2194-	2195-	2196-	2197-	2198-	36.0	.018	36.0	.180	24.0	1.200
0.22	.813 (20.65)	.235 (5.97)	1.013 (25.73)	2199-	2200-	2201-	2202-	2203-	2204-	36.0	.020	36.0	.200	23.0	1.270
0.27	.687 (17.45)	.312 (7.92)	.887 (22.53)	2205-	2206-	2207-	2208-	2209-	2210-	36.0	.024	36.0	.240	19.0	1.280
0.33	.687 (17.45)	.312 (7.92)	.887 (22.53)	2211-	2212-	2213-	2214-	2215-	2216-	36.0	.030	36.0	.300	18.0	1.480
0.39	.813 (20.65)	.312 (7.92)	1.013 (25.73)	2217-	2218-	2219-	2220-	2221-	2222-	36.0	.035	36.0	.350	17.0	1.660
0.47	.813 (20.65)	.312 (7.92)	1.013 (25.73)	2223-	2224-	2225-	2226-	2227-	2228-	36.0	.042	36.0	.420	15.7	1.850
0.50	.813 (20.65)	.312 (7.92)	1.013 (25.73)	2229-	2230-	2231-	2232-	2233-	2234-	36.0	.045	36.0	.450	15.2	1.900
0.56	.813 (20.65)	.400 (10.16)	1.013 (25.73)	2235-	2236-	2237-	2238-	2239-	2240-	36.0	.050	36.0	.500	14.4	2.010
0.68	.813 (20.65)	.400 (10.16)	1.013 (25.73)	2241-	2242-	2243-	2244-	2245-	2246-	36.0	.061	36.0	.610	14.0	2.380
0.82	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	2247-	2248-	2249-	2250-	2251-	2252-	36.0	.074	36.0	.740	12.0	2.460
1.0	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	2253-	2254-	2255-	2256-	2257-	2258-	36.0	.09	36.0	.900	10.0	2.500
1.2	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	2259-	2260-	2261-	2262-	2263-	2264-	36.0	.11	36.0	1.080	9.1	2.730
1.5	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	2265-	2266-	2267-	2268-	2269-	2270-	36.0	.14	36.0	1.350	7.7	2.900
1.8	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	2271-	2272-	2273-	2274-	2275-	2276-	36.0	.16	36.0	1.620	6.6	3.000
2.0	1.125 (28.58)	.500 (12.70)	1.325 (33.66)	2277-	2278-	2279-	2280-	2281-	2282-	36.0	.18	36.0	1.800	6.2	3.100
2.2	1.125 (28.58)	.500 (12.70)	1.325 (33.66)	2283-	2284-	2285-	2286-	2287-	2288-	36.0	.20	36.0	1.980	5.8	3.200

See footnotes at end of table.

MIL-PRF-83421/6D

TABLE I. Electrical characteristics, dimensions and dash numbers - Continued.

CRH32 - 50 VOLTS (DC RATING)															
Capacitance value (nom) (in μ f)	Dimensions (inches with mm in parentheses) <u>1/</u>			DASH NUMBERS <u>2/</u>						AC Ratings (sinusoidal operation from -65° to 85°C) <u>3/</u>					
	L $\pm$.030 (.76)	D $\pm$.020 (0.51) -.010 (0.25)	G, max	Capacitance tolerance value (in %)						0 to 400Hz		4 KHz		40 KHz	
				$\pm$ 0.25	$\pm$ 0.5	$\pm$ 1.0	$\pm$ 2.0	$\pm$ 5.0	$\pm$ 10.0	Volts	Current (A)	Volts	Current (A)	Volts	Current (A)
2.7	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	2289-	2290-	2291-	2292-	2293-	2294-	36.0	.24	36.0	2.430	5.0	3.340
3.0	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	2295-	2296-	2297-	2298-	2299-	2300-	36.0	.27	36.0	2.700	4.5	3.400
3.3	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	2301-	2302-	2303-	2304-	2305-	2306-	36.0	.30	36.0	2.970	4.2	3.500
3.9	1.375 (34.93)	.562 (14.27)	1.575 (40.01)	2307-	2308-	2309-	2310-	2311-	2312-	36.0	.35	36.0	3.510	3.7	3.600
4.7	1.375 (34.93)	.670 (17.02)	1.575 (40.01)	2313-	2314-	2315-	2316-	2317-	2318-	36.0	.42	31.0	3.600	3.1	3.600
5.0	1.375 (34.93)	.670 (17.02)	1.575 (40.01)	2319-	2320-	2321-	2322-	2323-	2324-	36.0	.45	29.0	3.600	2.9	3.600
5.6	1.375 (34.93)	.670 (17.02)	1.575 (40.01)	2325-	2326-	2327-	2328-	2329-	2330-	36.0	.50	26.0	3.600	2.6	3.600
6.8	1.875 (47.63)	.670 (17.02)	2.075 (52.71)	2331-	2332-	2333-	2334-	2335-	2336-	36.0	.61	21.2	3.600	2.1	3.600
8.0	1.875 (47.63)	.670 (17.02)	2.075 (52.71)	2337-	2338-	2339-	2340-	2341-	2342-	36.0	.72	18.0	3.600	1.8	3.600
8.2	1.875 (47.63)	.670 (17.02)	2.075 (52.71)	2343-	2344-	2345-	2346-	2347-	2348-	36.0	.74	17.6	3.600	1.8	3.600
10.0	1.875 (47.63)	.670 (17.02)	2.075 (52.71)	2349-	2350-	2351-	2352-	2353-	2354-	36.0	.90	14.4	3.600	1.4	3.600
CRH33 - 100 VOLTS (DC RATING)															
0.001	.500 (12.70)	.170 (4.32)	.700 (17.78)	3001-	3002-	3003-	3004-	3005-	3006-	60.0	.001	60.0	.002	60.0	.015
0.0012	.500 (12.70)	.170 (4.32)	.700 (17.78)	3007-	3008-	3009-	3010-	3011-	3012-	60.0	.001	60.0	.002	60.0	.018
0.0015	.500 (12.70)	.170 (4.32)	.700 (17.78)	3013-	3014-	3015-	3016-	3017-	3018-	60.0	.001	60.0	.002	60.0	.022
0.0018	.500 (12.70)	.170 (4.32)	.700 (17.78)	3019-	3020-	3021-	3022-	3023-	3024-	60.0	.001	60.0	.003	60.0	.027
0.002	.500 (12.70)	.170 (4.32)	.700 (17.78)	3025-	3026-	3027-	3028-	3029-	3030-	60.0	.001	60.0	.003	60.0	.030
0.0022	.500 (12.70)	.170 (4.32)	.700 (17.78)	3031-	3032-	3033-	3034-	3035-	3036-	60.0	.001	60.0	.003	60.0	.033
0.0027	.500 (12.70)	.170 (4.32)	.700 (17.78)	3037-	3038-	3039-	3040-	3041-	3042-	60.0	.001	60.0	.004	60.0	.041
0.0033	.500 (12.70)	.170 (4.32)	.700 (17.78)	3043-	3044-	3045-	3046-	3047-	3048-	60.0	.001	60.0	.005	60.0	.050
0.0039	.500 (12.70)	.170 (4.32)	.700 (17.78)	3049-	3050-	3051-	3052-	3053-	3054-	60.0	.001	60.0	.006	60.0	.058
0.0047	.500 (12.70)	.170 (4.32)	.700 (17.78)	3055-	3056-	3057-	3058-	3059-	3060-	60.0	.001	60.0	.007	60.0	.071
0.005	.500 (12.70)	.170 (4.32)	.700 (17.78)	3061-	3062-	3063-	3064-	3065-	3066-	60.0	.001	60.0	.008	60.0	.075
0.0056	.500 (12.70)	.170 (4.32)	.700 (17.78)	3067-	3068-	3069-	3070-	3071-	3072-	60.0	.001	60.0	.008	60.0	.084
0.0068	.562 (14.27)	.170 (4.32)	.762 (19.35)	3073-	3074-	3075-	3076-	3077-	3078-	60.0	.001	60.0	.010	60.0	.10
0.0082	.562 (14.27)	.170 (4.32)	.762 (19.35)	3079-	3080-	3081-	3082-	3083-	3084-	60.0	.001	60.0	.012	60.0	.12
0.01	.687 (17.45)	.170 (4.32)	.887 (22.53)	3085-	3086-	3087-	3088-	3089-	3090-	60.0	.002	60.0	.015	60.0	.15
0.012	.687 (17.45)	.170 (4.32)	.887 (22.53)	3091-	3092-	3093-	3094-	3095-	3096-	60.0	.002	60.0	.018	59.0	.18
0.015	.687 (17.45)	.170 (4.32)	.887 (22.53)	3097-	3098-	3099-	3100-	3101-	3102-	60.0	.002	60.0	.022	58.0	.22
0.018	.687 (17.45)	.193 (4.90)	.887 (22.53)	3103-	3104-	3105-	3106-	3107-	3108-	60.0	.003	60.0	.027	57.0	.26
0.02	.687 (17.45)	.193 (4.90)	.887 (22.53)	3109-	3110-	3111-	3112-	3113-	3114-	60.0	.003	60.0	.030	55.0	.28
0.022	.687 (17.45)	.193 (4.90)	.887 (22.53)	3115-	3116-	3117-	3118-	3119-	3120-	60.0	.003	60.0	.033	53.0	.29
0.027	.687 (17.45)	.193 (4.90)	.887 (22.53)	3121-	3122-	3123-	3124-	3125-	3126-	60.0	.004	60.0	.041	51.0	.34
0.033	.687 (17.45)	.193 (4.90)	.887 (22.53)	3127-	3128-	3129-	3130-	3131-	3132-	60.0	.005	60.0	.050	50.0	.41
0.039	.687 (17.45)	.235 (5.97)	.887 (22.53)	3133-	3134-	3135-	3136-	3137-	3138-	60.0	.006	60.0	.059	48.0	.47
0.047	.687 (17.45)	.235 (5.97)	.887 (22.53)	3139-	3140-	3141-	3142-	3143-	3144-	60.0	.007	60.0	.070	47.0	.55

See footnotes at end of table.

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TABLE I. Electrical characteristics, dimensions and dash numbers - Continued.

CRH33 - 100 VOLTS (DC RATING)															
Capacitance value (nom) (in μ f)	Dimensions (inches with mm in parentheses) <u>1/</u>			DASH NUMBERS <u>2/</u>						AC Ratings (sinusoidal operation from -65° to 85°C) <u>3/</u>					
	L $\pm$.030 (.76)	D $\pm$.020 (0.51) -.010 (0.25)	G, max	Capacitance tolerance value (in %)						0 to 400Hz		4 KHz		40 KHz	
				$\pm$ 0.25	$\pm$ 0.5	$\pm$ 1.0	$\pm$ 2.0	$\pm$ 5.0	$\pm$ 10.0	Volts	Current (A)	Volts	Current (A)	Volts	Current (A)
0.05	.687 (17.45)	.235 (5.97)	.887 (22.53)	3145-	3146-	3147-	3148-	3149-	3150-	60.0	.008	60.0	.075	46.0	.58
0.056	.687 (17.45)	.235 (5.97)	.887 (22.53)	3151-	3152-	3153-	3154-	3155-	3156-	60.0	.008	60.0	.084	46.0	.64
0.068	.813 (20.65)	.235 (5.97)	1.013 (25.73)	3157-	3158-	3159-	3160-	3161-	3162-	60.0	.010	60.0	.10	42.0	.71
0.082	.687 (17.45)	.312 (7.92)	.887 (22.53)	3163-	3164-	3165-	3166-	3167-	3168-	60.0	.012	60.0	.12	38.0	.78
0.1	.687 (17.45)	.312 (7.92)	.887 (22.53)	3169-	3170-	3171-	3172-	3173-	3174-	60.0	.015	60.0	.15	36.0	.90
0.12	.687 (17.45)	.312 (7.92)	.887 (22.53)	3175-	3176-	3177-	3178-	3179-	3180-	60.0	.018	60.0	.18	35.0	1.05
0.15	.813 (20.65)	.312 (7.92)	1.013 (25.73)	3181-	3182-	3183-	3184-	3185-	3186-	60.0	.022	60.0	.23	33.0	1.24
0.18	.813 (20.65)	.312 (7.92)	1.013 (25.73)	3187-	3188-	3189-	3190-	3191-	3192-	60.0	.027	60.0	.27	31.0	1.40
0.20	.813 (20.65)	.312 (7.92)	1.013 (25.73)	3193-	3194-	3195-	3196-	3197-	3198-	60.0	.030	60.0	.30	30.0	1.50
0.22	.813 (20.65)	.312 (7.92)	1.013 (25.73)	3199-	3200-	3201-	3202-	3203-	3204-	60.0	.033	60.0	.33	27.0	1.50
0.27	1.063 (27.00)	.312 (7.92)	1.263 (32.08)	3205-	3206-	3207-	3208-	3209-	3210-	60.0	.041	60.0	.41	24.0	1.62
0.33	1.063 (27.00)	.312 (7.92)	1.263 (32.08)	3211-	3212-	3213-	3214-	3215-	3216-	60.0	.050	60.0	.50	23.0	1.90
0.39	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	3217-	3218-	3219-	3220-	3221-	3222-	60.0	.058	60.0	.59	22.0	2.15
0.47	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	3223-	3224-	3225-	3226-	3227-	3228-	60.0	.071	60.0	.71	21.0	2.47
0.50	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	3229-	3230-	3231-	3232-	3233-	3234-	60.0	.075	60.0	.75	20.0	2.50
0.56	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	3235-	3236-	3237-	3238-	3239-	3240-	60.0	.084	60.0	.84	19.0	2.64
0.68	1.125 (28.58)	.500 (12.70)	1.325 (33.66)	3241-	3242-	3243-	3244-	3245-	3246-	60.0	.10	60.0	1.02	16.0	2.72
0.82	1.125 (28.58)	.500 (12.70)	1.325 (33.66)	3247-	3248-	3249-	3250-	3251-	3252-	60.0	.12	60.0	1.23	14.0	2.87
1.0	1.125 (28.58)	.562 (14.27)	1.325 (33.66)	3253-	3254-	3255-	3256-	3257-	3258-	60.0	.15	60.0	1.50	12.0	3.00
1.2	1.125 (28.58)	.562 (14.27)	1.325 (33.66)	3259-	3260-	3261-	3262-	3263-	3264-	60.0	.18	60.0	1.80	11.0	3.25
1.5	1.375 (34.93)	.562 (14.27)	1.575 (40.01)	3265-	3266-	3267-	3268-	3269-	3270-	60.0	.23	60.0	2.26	10.0	3.75
1.8	1.375 (34.93)	.670 (17.02)	1.575 (40.01)	3271-	3272-	3273-	3274-	3275-	3276-	60.0	.27	60.0	2.70	8.5	3.96
2.0	1.375 (34.93)	.670 (17.02)	1.575 (40.01)	3277-	3278-	3279-	3280-	3281-	3282-	60.0	.30	60.0	3.00	8.1	4.10
2.2	1.375 (34.93)	.670 (17.02)	1.575 (40.01)	3283-	3284-	3285-	3286-	3287-	3288-	60.0	.33	60.0	3.31	7.5	4.12
2.7	1.875 (47.63)	.670 (17.02)	2.075 (52.71)	3289-	3290-	3291-	3292-	3293-	3294-	60.0	.41	60.0	4.05	6.5	4.40
3.0	1.875 (47.63)	.670 (17.02)	2.075 (52.71)	3295-	3296-	3297-	3298-	3299-	3300-	60.0	.45	60.0	4.51	6.0	4.51
3.3	1.875 (47.63)	.670 (17.02)	2.075 (52.71)	3301-	3302-	3303-	3304-	3305-	3306-	60.0	.50	55.0	4.73	5.5	4.55
3.9	1.875 (47.63)	.750 (19.05)	2.075 (52.71)	3307-	3308-	3309-	3310-	3311-	3312-	60.0	.59	49.0	4.90	5.0	4.90
4.7	1.875 (47.63)	.750 (19.05)	2.075 (52.71)	3313-	3314-	3315-	3316-	3317-	3318-	60.0	.71	43.0	5.0	4.3	5.0
5.0	1.875 (47.63)	.750 (19.05)	2.075 (52.71)	3319-	3320-	3321-	3322-	3323-	3324-	60.0	.75	40.0	5.0	4.0	5.0
5.6	1.875 (47.63)	.750 (19.05)	2.075 (52.71)	3325-	3326-	3327-	3328-	3329-	3330-	60.0	.84	36.0	5.0	3.6	5.0
6.8	2.375 (60.33)	1.000 (25.4)	2.575 (65.41)	3331-	3332-	3333-	3334-	3335-	3336-	60.0	1.02	29.0	5.0	3.0	5.0
8.0	2.375 (60.33)	1.000 (25.4)	2.575 (65.41)	3337-	3338-	3339-	3340-	3341-	3342-	60.0	1.20	25.0	5.0	2.5	5.0
8.2	2.375 (60.33)	1.000 (25.4)	2.575 (65.41)	3343-	3344-	3345-	3346-	3347-	3348-	60.0	1.23	24.4	5.0	2.4	5.0
10.0	2.375 (60.33)	1.000 (25.4)	2.575 (65.41)	3349-	3350-	3351-	3352-	3353-	3354-	60.0	1.50	20.0	5.0	2.0	5.0

See footnotes at end of table.

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TABLE I. Electrical characteristics, dimensions and dash numbers - Continued.

CRH34 - 200 VOLTS (DC RATING)															
Capacitance value (nom) (in μf)	Dimensions (inches with mm in parentheses) <u>1/</u>			DASH NUMBERS <u>2/</u>						AC Ratings (sinusoidal operation from -65° to 85°C) <u>3/</u>					
	L ± 0.30 (.76)	D $+0.020$ (0.51) -0.010 (0.25)	G, max	Capacitance tolerance value (in %)						0 to 400Hz		4 KHz		40 KHz	
				± 0.25	± 0.5	± 1.0	± 2.0	± 5.0	± 10.0	Volts	Current (A)	Volts	Current (A)	Volts	Current (A)
0.001	.562 (14.27)	.170 (4.32)	.762 (19.35)	4001-	4002-	4003-	4004-	4005-	4006-	120	.001	120	.003	80	.020
0.0012	.562 (14.27)	.170 (4.32)	.762 (19.35)	4007-	4008-	4009-	4010-	4011-	4012-	120	.001	120	.004	80	.024
0.0015	.562 (14.27)	.170 (4.32)	.762 (19.35)	4013-	4014-	4015-	4016-	4017-	4018-	120	.001	120	.004	80	.030
0.0018	.562 (14.27)	.170 (4.32)	.762 (19.35)	4019-	4020-	4021-	4022-	4023-	4024-	120	.001	120	.005	80	.036
0.002	.562 (14.27)	.170 (4.32)	.762 (19.35)	4025-	4026-	4027-	4028-	4029-	4030-	120	.001	120	.006	80	.040
0.0022	.562 (14.27)	.170 (4.32)	.762 (19.35)	4031-	4032-	4033-	4034-	4035-	4036-	120	.001	120	.007	80	.044
0.0027	.562 (14.27)	.170 (4.32)	.762 (19.35)	4037-	4038-	4039-	4040-	4041-	4042-	120	.001	120	.008	80	.054
0.0033	.562 (14.27)	.170 (4.32)	.762 (19.35)	4043-	4044-	4045-	4046-	4047-	4048-	120	.001	120	.010	80	.066
0.0039	.562 (14.27)	.170 (4.32)	.762 (19.35)	4049-	4050-	4051-	4052-	4053-	4054-	120	.001	120	.012	80	.078
0.0047	.562 (14.27)	.170 (4.32)	.762 (19.35)	4055-	4056-	4057-	4058-	4059-	4060-	120	.001	120	.014	80	.094
0.005	.562 (14.27)	.170 (4.32)	.762 (19.35)	4061-	4062-	4063-	4064-	4065-	4066-	120	.002	120	.015	80	.10
0.0056	.562 (14.27)	.170 (4.32)	.762 (19.35)	4067-	4068-	4069-	4070-	4071-	4072-	120	.002	120	.017	80	.11
0.0068	.562 (14.27)	.170 (4.32)	.762 (19.35)	4073-	4074-	4075-	4076-	4077-	4078-	120	.002	120	.020	80	.14
0.0082	.562 (14.27)	.193 (4.90)	.762 (19.35)	4079-	4080-	4081-	4082-	4083-	4084-	120	.002	120	.025	80	.16
0.01	.562 (14.27)	.193 (4.90)	.762 (19.35)	4085-	4086-	4087-	4088-	4089-	4090-	120	.003	120	.030	80	.20
0.012	.562 (14.27)	.193 (4.90)	.762 (19.35)	4091-	4092-	4093-	4094-	4095-	4096-	120	.004	120	.036	78	.23
0.015	.562 (14.27)	.235 (5.97)	.762 (19.35)	4097-	4098-	4099-	4100-	4101-	4102-	120	.004	120	.045	76	.29
0.018	.687 (17.45)	.235 (5.97)	.887 (22.53)	4103-	4104-	4105-	4106-	4107-	4108-	120	.005	120	.054	74	.33
0.02	.687 (17.45)	.235 (5.97)	.887 (22.53)	4109-	4110-	4111-	4112-	4113-	4114-	120	.006	120	.060	71	.36
0.022	.687 (17.45)	.235 (5.97)	.887 (22.53)	4115-	4116-	4117-	4118-	4119-	4120-	120	.007	120	.066	68	.37
0.027	.687 (17.45)	.312 (7.92)	.887 (22.53)	4121-	4122-	4123-	4124-	4125-	4126-	120	.008	120	.081	65	.44
0.033	.687 (17.45)	.312 (7.92)	.887 (22.53)	4127-	4128-	4129-	4130-	4131-	4132-	120	.010	120	.099	62	.51
0.039	.687 (17.45)	.312 (7.92)	.887 (22.53)	4133-	4134-	4135-	4136-	4137-	4138-	120	.012	120	.12	60	.59
0.047	.687 (17.45)	.312 (7.92)	.887 (22.53)	4139-	4140-	4141-	4142-	4143-	4144-	120	.014	120	.14	57	.67
0.05	.687 (17.45)	.312 (7.92)	.887 (22.53)	4145-	4146-	4147-	4148-	4149-	4150-	120	.015	120	.15	56	.70
0.056	.813 (20.65)	.312 (7.92)	1.013 (20.65)	4151-	4152-	4153-	4154-	4155-	4156-	120	.017	120	.17	56	.78
0.068	.813 (20.65)	.312 (7.92)	1.013 (20.65)	4157-	4158-	4159-	4160-	4161-	4162-	120	.020	120	.20	50	.85
0.082	.813 (20.65)	.312 (7.92)	1.013 (20.65)	4163-	4164-	4165-	4166-	4167-	4168-	120	.025	120	.25	44	.90
0.1	.813 (20.65)	.312 (7.92)	1.013 (20.65)	4169-	4170-	4171-	4172-	4173-	4174-	120	.030	120	.30	42	1.10
0.12	.813 (20.65)	.312 (7.92)	1.013 (20.65)	4175-	4176-	4177-	4178-	4179-	4180-	120	.036	120	.36	40	1.20
0.15	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	4181-	4182-	4183-	4184-	4185-	4186-	120	.045	120	.45	36	1.34
0.18	1.375 (34.93)	.400 (10.16)	1.575 (40.01)	4187-	4188-	4189-	4190-	4191-	4192-	120	.054	120	.54	34	1.54
0.20	1.375 (34.93)	.400 (10.16)	1.575 (40.01)	4193-	4194-	4195-	4196-	4197-	4198-	120	.060	120	.60	33	1.65
0.22	1.375 (34.93)	.400 (10.16)	1.575 (40.01)	4199-	4200-	4201-	4202-	4203-	4204-	120	.066	120	.66	32	1.76
0.27	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	4205-	4206-	4207-	4208-	4209-	4210-	120	.081	120	.81	29	1.96
0.33	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	4211-	4212-	4213-	4214-	4215-	4216-	120	.099	120	.99	28	2.31

See footnotes at end of table.

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TABLE I. Electrical characteristics, dimensions and dash numbers - Continued.

CRH34 - 200 VOLTS (DC RATING)															
Capacitance value (nom) (in μ f)	Dimensions (inches with mm in parentheses) <u>1/</u>			DASH NUMBERS <u>2/</u>						AC Ratings (sinusoidal operation from -65° to 85°C) <u>3/</u>					
	L $\pm$.030 (.76)	D $\pm$.020 (0.51) -.010 (0.25)	G, max	Capacitance tolerance value (in %)						0 to 400Hz		4 KHz		40 KHz	
				$\pm$ 0.25	$\pm$ 0.5	$\pm$ 1.0	$\pm$ 2.0	$\pm$ 5.0	$\pm$ 10.0	Volts	Current (A)	Volts	Current (A)	Volts	Current (A)
0.39	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	4217-	4218-	4219-	4220-	4221-	4222-	120	.12	120	1.17	27	2.63
0.47	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	4223-	4224-	4225-	4226-	4227-	4228-	120	.14	120	1.41	26	3.06
0.50	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	4229-	4230-	4231-	4232-	4233-	4234-	120	.15	120	1.50	25	3.13
0.56	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	4235-	4236-	4237-	4238-	4239-	4240-	120	.17	120	1.61	23	3.17
0.68	1.375 (34.93)	.562 (14.27)	1.575 (40.01)	4241-	4242-	4243-	4244-	4245-	4246-	120	.20	120	1.87	20	3.40
0.82	1.875 (47.63)	.562 (14.27)	2.075 (52.71)	4247-	4248-	4249-	4250-	4251-	4252-	120	.25	120	2.05	18	3.70
1.0	1.875 (47.63)	.562 (14.27)	2.075 (52.71)	4253-	4254-	4255-	4256-	4257-	4258-	120	.30	120	2.25	15	3.75
1.2	1.875 (47.63)	.562 (14.27)	2.075 (52.71)	4259-	4260-	4261-	4262-	4263-	4264-	120	.36	120	2.61	13.5	4.05
1.5	1.875 (47.63)	.670 (17.02)	2.075 (52.71)	4265-	4266-	4267-	4268-	4269-	4270-	120	.45	120	3.20	12	4.50
1.8	1.875 (47.63)	.750 (19.05)	2.075 (52.71)	4271-	4272-	4273-	4274-	4275-	4276-	120	.54	110	3.74	11	5.00
2.0	1.875 (47.63)	.750 (19.05)	2.075 (52.71)	4277-	4278-	4279-	4280-	4281-	4282-	120	.60	100	4.05	10	5.00
2.2	1.875 (47.63)	.750 (19.05)	2.075 (52.71)	4283-	4284-	4285-	4286-	4287-	4288-	120	.66	90.5	4.20	9.1	5.00
2.5	1.875 (47.63)	.750 (19.05)	2.075 (52.71)	4289-	4290-	4291-	4292-	4293-	4294-	120	.75	80	4.31	8	5.00
2.7	1.875 (47.63)	.750 (19.05)	2.075 (52.71)	4295-	4296-	4297-	4298-	4299-	4300-	120	.81	77	4.60	7.7	5.20
3.0	1.875 (47.63)	1.000 (25.40)	2.075 (52.71)	4301-	4302-	4303-	4304-	4305-	4306-	120	.90	70	5.04	7	5.27
3.3	1.875 (47.63)	1.000 (25.40)	2.075 (52.71)	4307-	4308-	4309-	4310-	4311-	4312-	120	.99	65	5.21	6.5	5.36
3.9	2.375 (60.33)	1.000 (25.40)	2.575 (65.41)	4313-	4314-	4315-	4316-	4317-	4318-	120	1.20	55	5.39	5.5	5.40
CRH35 - 400 VOLTS (DC RATING)															
0.001	.562 (14.27)	.193 (4.90)	.762 (19.35)	5001-	5002-	5003-	5004-	5005-	5006-	240	.001	240	.006	100	.025
0.0012	.562 (14.27)	.193 (4.90)	.762 (19.35)	5007-	5008-	5009-	5010-	5011-	5012-	240	.001	240	.007	100	.030
0.0015	.562 (14.27)	.193 (4.90)	.762 (19.35)	5013-	5014-	5015-	5016-	5017-	5018-	240	.001	240	.009	100	.037
0.0018	.562 (14.27)	.193 (4.90)	.762 (19.35)	5019-	5020-	5021-	5022-	5023-	5024-	240	.001	240	.011	100	.045
0.002	.562 (14.27)	.193 (4.90)	.762 (19.35)	5025-	5026-	5027-	5028-	5029-	5030-	240	.001	240	.012	100	.050
0.0022	.562 (14.27)	.193 (4.90)	.762 (19.35)	5031-	5032-	5033-	5034-	5035-	5036-	240	.001	240	.013	100	.055
0.0027	.562 (14.27)	.235 (5.97)	.762 (19.35)	5037-	5038-	5039-	5040-	5041-	5042-	240	.002	240	.016	100	.068
0.0033	.562 (14.27)	.235 (5.97)	.762 (19.35)	5043-	5044-	5045-	5046-	5047-	5048-	240	.002	240	.020	100	.083
0.0039	.562 (14.27)	.235 (5.97)	.762 (19.35)	5049-	5050-	5051-	5052-	5053-	5054-	240	.002	240	.023	100	.097
0.0047	.562 (14.27)	.235 (5.97)	.762 (19.35)	5055-	5056-	5057-	5058-	5059-	5060-	240	.003	240	.028	100	.12
0.005	.562 (14.27)	.235 (5.97)	.762 (19.35)	5061-	5062-	5063-	5064-	5065-	5066-	240	.003	240	.030	100	.13
0.0056	.562 (14.27)	.235 (5.97)	.762 (19.35)	5067-	5068-	5069-	5070-	5071-	5072-	240	.003	240	.034	100	.14
0.0068	.687 (17.45)	.235 (5.97)	.887 (22.53)	5073-	5074-	5075-	5076-	5077-	5078-	240	.004	240	.041	100	.17
0.0082	.687 (17.45)	.235 (5.97)	.887 (22.53)	5079-	5080-	5081-	5082-	5083-	5084-	240	.005	240	.049	100	.21
0.01	.687 (17.45)	.235 (5.97)	.887 (22.53)	5085-	5086-	5087-	5088-	5089-	5090-	240	.006	240	.060	100	.25
0.012	.687 (17.45)	.235 (5.97)	.887 (22.53)	5091-	5092-	5093-	5094-	5095-	5096-	240	.007	240	.072	100	.30
0.015	.813 (20.65)	.235 (5.97)	1.013 (25.73)	5097-	5098-	5099-	5100-	5101-	5102-	240	.009	240	.090	94	.35
0.018	.813 (20.65)	.312 (7.92)	1.013 (25.73)	5103-	5104-	5105-	5106-	5107-	5108-	240	.011	240	.11	90	.41

See footnotes at end of table.

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TABLE I. Electrical characteristics, dimensions and dash numbers - Continued.

CRH35 - 400 VOLTS (DC RATING)															
Capacitance value (nom) (in μ f)	Dimensions (inches with mm in parentheses) <u>1/</u>			DASH NUMBERS <u>2/</u>						AC Ratings (sinusoidal operation from -65° to 85°C) <u>3/</u>					
	L $\pm$.030 (.76)	D $\pm$.020 (0.51) -.010 (0.25)	G, max	Capacitance tolerance value (in %)						0 to 400Hz		4 KHz		40 KHz	
				$\pm$ 0.25	$\pm$ 0.5	$\pm$ 1.0	$\pm$ 2.0	$\pm$ 5.0	$\pm$ 10.0	Volts	Current (A)	Volts	Current (A)	Volts	Current (A)
0.02	.813 (20.65)	.312 (7.92)	1.013 (25.73)	5109-	5110-	5111-	5112-	5113-	5114-	240	.012	240	.12	88	.44
0.022	.813 (20.65)	.312 (7.92)	1.013 (25.73)	5115-	5116-	5117-	5118-	5119-	5120-	240	.013	240	.13	85	.47
0.027	.813 (20.65)	.312 (7.92)	1.013 (25.73)	5121-	5122-	5123-	5124-	5125-	5126-	240	.016	240	.16	81	.55
0.033	.813 (20.65)	.312 (7.92)	1.013 (25.73)	5127-	5128-	5129-	5130-	5131-	5132-	240	.020	240	.20	78	.65
0.039	.813 (20.65)	.312 (7.92)	1.013 (25.73)	5133-	5134-	5135-	5136-	5137-	5138-	240	.023	240	.23	75	.73
0.047	.813 (20.65)	.400 (10.16)	1.013 (25.73)	5139-	5140-	5141-	5142-	5143-	5144-	240	.028	240	.28	71	.83
0.05	.813 (20.65)	.400 (10.16)	1.013 (25.73)	5145-	5146-	5147-	5148-	5149-	5150-	240	.030	240	.30	70	.88
0.056	.813 (20.65)	.400 (10.16)	1.013 (25.73)	5151-	5152-	5153-	5154-	5155-	5156-	240	.034	240	.34	67.5	.95
0.068	.813 (20.65)	.400 (10.16)	1.013 (25.73)	5157-	5158-	5159-	5160-	5161-	5162-	240	.041	240	.41	60	1.02
0.082	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	5163-	5164-	5165-	5166-	5167-	5168-	240	.049	240	.49	50	1.03
0.1	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	5169-	5170-	5171-	5172-	5173-	5174-	240	.060	240	.60	46	1.20
0.12	1.063 (27.00)	.400 (10.16)	1.263 (32.08)	5175-	5176-	5177-	5178-	5179-	5180-	240	.072	240	.72	44.5	1.34
0.15	1.375 (34.93)	.400 (10.16)	1.575 (40.01)	5181-	5182-	5183-	5184-	5185-	5186-	240	.090	240	.83	40	1.50
0.18	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	5187-	5188-	5189-	5190-	5191-	5192-	240	.11	240	.95	38	1.70
0.20	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	5193-	5194-	5195-	5196-	5197-	5198-	240	.12	240	1.03	37	1.85
0.22	1.375 (34.93)	.500 (12.70)	1.575 (40.01)	5199-	5200-	5201-	5202-	5203-	5204-	240	.13	240	1.10	35	1.93
0.27	1.375 (34.93)	.562 (14.27)	1.575 (40.01)	5205-	5206-	5207-	5208-	5209-	5210-	240	.16	240	1.21	33	2.24
0.33	1.375 (34.93)	.562 (14.27)	1.575 (40.01)	5211-	5212-	5213-	5214-	5215-	5216-	240	.20	240	1.32	32	2.65
0.39	1.875 (47.63)	.562 (14.27)	2.075 (52.71)	5217-	5218-	5219-	5220-	5221-	5222-	240	.23	240	1.48	32	3.14
0.47	1.875 (47.63)	.562 (14.27)	2.075 (52.71)	5223-	5224-	5225-	5226-	5227-	5228-	240	.28	240	1.68	31	3.64
0.50	1.875 (47.63)	.562 (14.27)	2.075 (52.71)	5229-	5230-	5231-	5232-	5233-	5234-	240	.30	240	1.75	30	3.75
0.56	1.875 (47.63)	.562 (14.27)	2.075 (52.71)	5235-	5236-	5237-	5238-	5239-	5240-	240	.34	240	1.92	29	4.05
0.68	1.875 (47.63)	.750 (19.05)	2.075 (52.71)	5241-	5242-	5243-	5244-	5245-	5246-	240	.41	240	2.26	26	4.50
0.82	1.875 (47.63)	.750 (19.05)	2.075 (52.71)	5247-	5248-	5249-	5250-	5251-	5252-	240	.49	234	2.63	23.4	4.80
1.0	1.875 (47.63)	.750 (19.05)	2.075 (52.71)	5253-	5254-	5255-	5256-	5257-	5258-	240	.60	208	3.00	20.8	5.20
1.2	1.875 (47.63)	1.000 (25.4)	2.075 (52.71)	5259-	5260-	5261-	5262-	5263-	5264-	240	.72	183	3.48	18.3	5.50
1.5	2.375 (60.33)	1.000 (25.4)	2.575 (65.41)	5265-	5266-	5267-	5268-	5269-	5270-	240	.90	160	4.14	16.0	6.00
1.8	2.375 (60.33)	1.000 (25.4)	2.575 (65.41)	5271-	5272-	5273-	5274-	5275-	5276-	240	1.08	150	4.69	15.0	6.80
2.0	2.375 (60.33)	1.000 (25.4)	2.575 (65.41)	5277-	5278-	5279-	5280-	5281-	5282-	240	1.20	140	5.00	14.0	7.00

1/ L and D dimensions are bare case dimensions.2/ The complete dash number will include the applicable FR level symbol (M, P, R or S) as a suffix.3/ For +100°C operation, linearly derate +85°C rating by 50 percent.

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REQUIREMENTS:

Dimensions and configuration: See [figure 1](#) and [table I](#).

Dielectric: Polyphenylene sulfide, metallized.

| Case material: Nonmagnetic (end seals may be of magnetic material).

Leads:

.500 inch (12.70 mm) and smaller case diameters: Composition W and final finish 32 of [MIL-STD-1276](#). Composition N and final finish 32 of [MIL-STD-1276](#) may be furnished when specified in contract or order (see [MIL-PRF-83421](#) ordering data).

.562 inch (14.27 mm) and larger case diameters: Composition C and final finish 32 of [MIL-STD-1276](#).

Capacitance value: See [table I](#).

Capacitance tolerance: See [table I](#).

Rated voltage: AC (see [table I](#)), DC (see [table I](#) and [table II](#)).

TABLE II. DC voltage ratings.

Styles	Volts, dc
CRH31	30
CRH32	50
CRH33	100
CRH34	200
CRH35	400

DC operating temperature range: -65°C to +125°C at full rated voltage.

| AC operating temperature range: -65°C to +100°C; derate linearly from +85°C to 50 percent of rated voltage at +100°C.

Failure rate (FR) level: M (1.0%), P (0.1%), R (0.01%), and S (0.001%) (established at dc rated voltage at +125°C).

| Burn-in: 140 percent, minimum of dc rated voltage shall be applied for 48 hours, minimum at +125°C +4°C, -0°C.

Thermal shock: [Method 107 of MIL-STD-202](#), test condition B, 10 cycles.

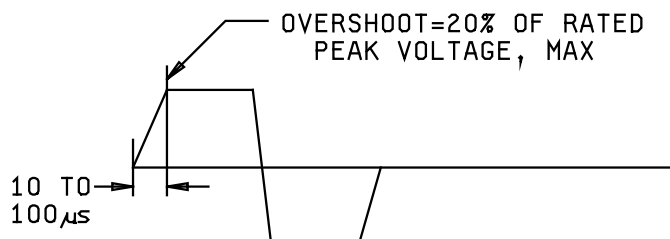
Seal: [Method 112 of MIL-STD-202](#), test condition C, procedure IIIa with the following exceptions and details: A bomb pressure of 45 ± 5 lbf/in² (gage), exposure time of 1 hour +1, -0 hour, dwell time of 1 hour maximum, and reject limit of $R_1 = 1 \times 10^{-6}$ atm cm³/s. Upon completion of test condition C, perform either test condition A, test condition B with mineral oil, or test condition D.

Leakage-rate sensitivity: 10^{-6} atm cm³/s.

Dielectric withstanding voltage (DWV): [Method 301 of MIL-STD-202](#).

Terminal to terminal:

AC: 100 Hz $\pm$ 10 Hz square wave, peak-to-peak voltage, three times dc rated voltage for 60 seconds, minimum but need not exceed 800 V peak-to-peak.



DC: 200 percent of dc rated voltage for 60 seconds, maximum.

Insulation resistance (IR): [Method 302 of MIL-STD-202](#). Charge time 5 minutes, maximum; however, for capacitance values greater than 1.0 μ F, an additional 1 minute per μ F is permitted.

Terminal to terminal (dc rated voltage): See table III.

Terminals to case: 10,000 megohms, minimum.

TABLE III. Insulation resistance versus capacitance value.

Temperature	Capacitance	Minimum insulation resistance (terminal to terminal)
+25°C	0 μ F to .1 μ F	1,000,000 megohms
	Greater than .1 μ F	100,000 megohm-microfarads
+85°C	0 μ F to .1 μ F	100,000 megohms
	Greater than .1 μ F	10,000 megohm-microfarads
+100°C	0 μ F to .1 μ F	50,000 megohms
	Greater than .1 μ F	5,000 megohm-microfarads
+125°C	0 μ F to .1 μ F	5,000 megohms
	Greater than .1 μ F	500 megohm-microfarads

Dissipation factor (DF): 0.15 percent maximum.

Dielectric absorption: 0.1 percent, maximum.

Barometric pressure (reduced) for qualification only: [Method 105 of MIL-STD-202](#), condition D (100,000 feet). 125 percent of dc rated voltage applied. See [MIL-PRF-83421](#) for voltage limitations.

Vibration, random (optional): In accordance with [MIL-PRF-83421](#) when ordered with "-" replaced with "H" in the PIN, (i.e. M83421/06H4123M).

Immersion: [Method 104 of MIL-STD-202](#), test condition C.

DWV:

Insulating sleeves: Greater than 4,000 volts, dc.

Terminal to terminal: 200 percent of dc rated voltage.

Terminals to case: 200 percent of dc rated voltage.

IR:

Insulating sleeves: 10,000 megohms, minimum.

Terminal to terminal: Not less than 50 percent of initial requirement.

Terminals to case: 5,000 megohms, minimum.

Δ Capacitance: Maximum of ± 0.25 percent of initial measured value.

DF: 0.15 percent maximum.

Moisture resistance: [Method 106 of MIL-STD-202](#).

DWV, IR, Δ Capacitance, and DF: Requirements shall be the same as for immersion.

Low temperature life: In accordance with [MIL-PRF-83421](#), except measurements shall be made at the following temperatures.

$t_1 = +25^\circ\text{C}$: Record initial capacitance, dissipation factor, and insulation resistance.

$t_2 = -65^\circ\text{C}$: 48 hours, rated dc voltage applied.

$t_3 =$ Maximum operating temperature: 2 hours rated dc voltage applied.

$t_4 = +25^\circ\text{C}$: Record capacitance, dissipation factor and insulation resistance. Limits of change shall be as specified in table IV.

TABLE IV. Post measurement limits.

t_1 to t_4	Styles CRH31 through CRH35
Capacitance	$\pm 0.5\%$ of initial measured value
Dissipation Factor	0.15% maximum
Insulation Resistance	Within initial requirement

Resistance to soldering heat: [Method 210 of MIL-STD-202](#), test condition B.

Δ Capacitance: Maximum ± 0.25 percent of initial measured value.

Temperature coefficient: In accordance with [MIL-PRF-83421](#). Capacitance shall be measured at the temperatures specified in [table V](#).

TABLE V. Capacitance changes.

Temperature <u>1/</u>	Styles CRH31 through CRH35
t ₃ to t ₂	± 2.0%
t ₃ to t ₄	± 1.0%
t ₃ to t ₁ or t ₅	± 0.25%

1/ t₁ = +25°C
t₂ = +125°C
t₃ = +25°C
t₄ = -55°C
t₅ = +25°C

Life (at +125°C): [Method 108 of MIL-STD-202](#).

Accelerated condition: 140 percent of dc rated voltage.

Rated condition: 100 percent of dc rated voltage.

IR:

Terminal to terminal: Not less than 33.3 percent of initial requirement.

Terminals to case: 5,000 megohms, minimum.

ΔCapacitance: Maximum of ±2.0 percent of initial measured value.

DF (at +25°C) after life: 0.25 percent, maximum.

AC conditioning: In accordance with [MIL-PRF-83421](#) at 40 kHz and rated voltage or rated current. Test samples shall be in accordance with table VI.

TABLE VI. AC conditioning test samples.

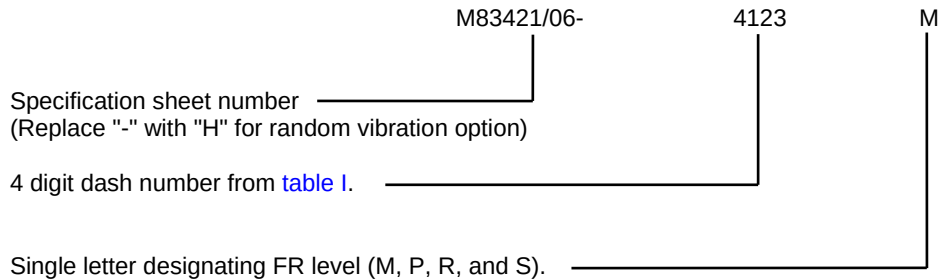
DC rated voltage (volts)	Capacitance range(μF)	Number samples <u>1/</u>
30	.001 to 22.0	10
50	.001 to 10.0	10
100	.001 to 8.2	10
200	.001 to 3.9	10
400	.001 to 2.0	10

1/ Samples shall include five of the lowest and five of the highest capacitance values manufactured during the previous 6 months. If only one capacitance value was manufactured, ten samples of that value shall be tested.

Marking: In accordance with [MIL-PRF-83421](#).

MIL-PRF-83421/6D

Part or Identifying Number (PIN): Consists of the basic number of this specification sheet with a dash number coded as shown in the following:



Packaging: Capacitors will be furnished in tape and reel packaging when so specified in the ordering data.

Changes from previous issue: The margins of this specification are marked with vertical lines to indicate where changes from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Referenced documents: In addition to [MIL-PRF-83421](#), this document also references [MIL-STD-202](#) and [MIL-STD-1276](#).

Custodians:
Army - CR
Navy - EC
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5910-2010-014)

Review activities:
Army - AR
Navy - AS, MC, OS, SH
Air Force - 19, 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using ASSIST Online database at <https://assist.daps.dla.mil/>.