

+105°C General Purpose Miniature Radial Lead, Capacitors Professional/Industrial Quality

Features-

- +105°C, Long Life, High Performance
- Efficient CV Per Case Size
- Domestic Source
- Short Lead Time



General Specifications-

Operating Temperature:

-40 to +105°C

Voltage Range:

6.3 – 450 VDC

Capacitance Range:

8.2μF to 22,000μF

Capacitance Tolerance:

±20% (Std.)

Case Size Range:

12.5 X 20.0mm – 18.0 X 40.0mm

Termination:

Two Radial Leads (Std.)
Other Options Available.

Life Validation Test: 4,000hrs @ +105°C

Δ CAP ≤ 20% From initial measurement.
Δ ESR ≤ 1.5X Initial specified limit.
Δ DCL ≤ Initial specified limit.

Shelf Test: 1,000hrs @ +105°C

Δ CAP ≤ 20% From initial measurement.
Δ ESR ≤ 1.5X Initial specified limit.
Δ DCL ≤ 2X Initial specified limit.

DC Leakage Current:

For: 6.3 – 160VDC $I = 0.002CV + 25$

For: 161 – 450VDC $I = 0.02CV + 25$

Where:

I is in μA

C is in μF

V is in Volts

Ripple Current Multipliers:

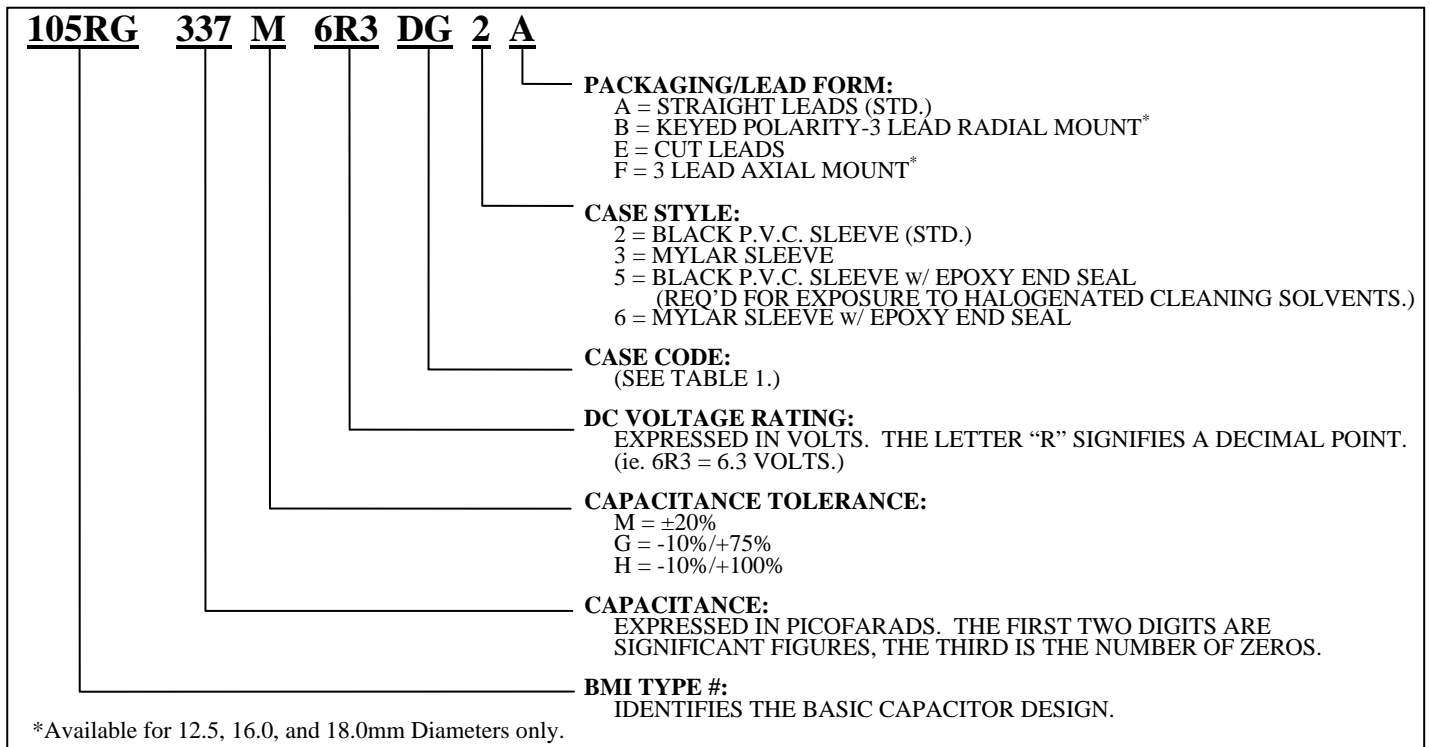
Temperature:

Ambient Temp.	+105°C	+85°C	±75°C
Multiplier	0.5	1.0	1.25

Frequency (Hz):

VDC	100-120	300-400	1k-10k	20k-100k
0-450	1.0	1.1	1.2	1.4

PART NUMBER BREAK-DOWN:



Radial-Leaded Capacitor Dimensions

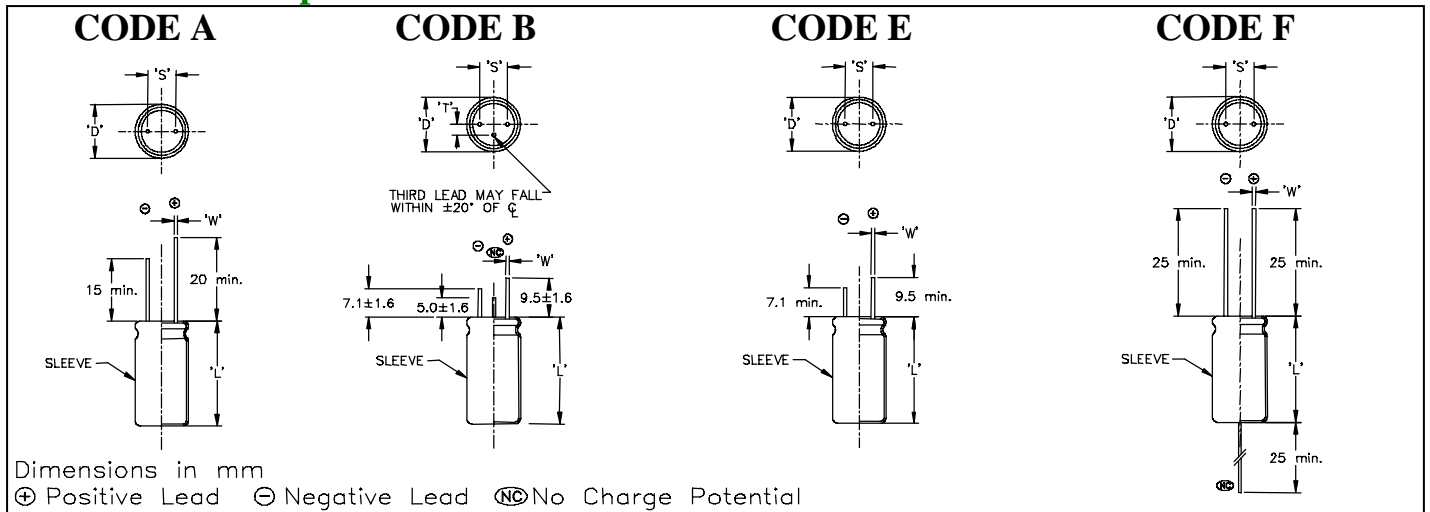


Table 1. Case Dimensions mm(in.)

CASE CODE	NOMINAL		STYLES 2 & 3		STYLES 5 & 6 (w/EPOXY)		LEAD SPACING		WIRE GAUGE
	'D'	'L'	'D' MAX.	'L' MAX.	'D' MAX.	'L' MAX.	S±0.6	T±0.6	'W'
DG	12.5 (0.492)	20.0 (0.787)	13.0 (0.512)	21.2 (0.835)	13.0 (0.512)	23.0 (0.906)	5.0 (0.197)	2.5 (0.098)	No. 20 AWG (0.032)
DK	12.5 (0.492)	25.0 (0.984)	13.0 (0.512)	26.2 (1.032)	13.0 (0.512)	29.0 (1.142)	5.0 (0.197)	2.5 (0.098)	No. 20 AWG (0.032)
DM	12.5 (0.492)	26.5 (1.043)	13.0 (0.512)	28.0 (1.102)	13.0 (0.512)	29.5 (1.161)	5.0 (0.197)	2.5 (0.098)	No. 20 AWG (0.032)
DT	12.5 (0.492)	33.5 (1.319)	13.0 (0.512)	34.2 (1.347)	13.0 (0.512)	36.0 (1.417)	5.0 (0.197)	2.5 (0.098)	No. 20 AWG (0.032)
DS	12.5 (0.492)	42.5 (1.673)	13.0 (0.512)	43.7 (1.721)	13.0 (0.512)	45.5 (1.791)	5.0 (0.197)	2.5 (0.098)	No. 20 AWG (0.032)
EK	16.0 (0.630)	25.0 (0.984)	16.5 (0.650)	26.2 (1.032)	16.5 (0.650)	27.9 (1.098)	7.5 (0.295)	3.5 (0.138)	No. 20 AWG (0.032)
EN	16.0 (0.630)	32.0 (0.260)	16.5 (0.650)	33.5 (1.319)	16.5 (0.650)	36.0 (1.417)	7.5 (0.295)	3.5 (0.138)	No. 20 AWG (0.032)
ER	16.0 (0.630)	36.0 (1.417)	16.5 (0.650)	37.5 (1.476)	16.5 (0.650)	40.0 (1.575)	7.5 (0.295)	3.5 (0.138)	No. 20 AWG (0.032)
EU	16.0 (0.630)	40.0 (1.575)	16.5 (0.650)	41.7 (1.642)	16.5 (0.650)	42.4 (1.669)	7.5 (0.295)	3.5 (0.138)	No. 20 AWG (0.032)
FR	18.0 (0.709)	36.0 (1.417)	18.5 (0.728)	37.5 (1.476)	18.5 (0.728)	40.0 (1.575)	7.5 (0.295)	3.5 (0.138)	No. 20 AWG (0.032)
FV	18.0 (0.709)	40.0 (1.575)	18.5 (0.728)	41.7 (1.642)	18.5 (0.728)	42.4 (1.669)	7.5 (0.295)	3.5 (0.138)	No. 20 AWG (0.032)

STANDARD RATINGS FOR TYPE 105RG

Rated Capacitance (μF)	Catalog Number	Nominal Case Size D x L (mm)	Maximum ESR +25°C 120Hz (Ω)	Maximum Ripple Current +85°C 120Hz (A_{rms})
6.3 VOLTS DC WORKING; 8 VOLTS DC SURGE				
2,700	105RG278M6R3DG2A	12.5 x 20.0	0.322	0.765
3,900	105RG398M6R3DK2A	12.5 x 25.0	0.210	1.032
4,700	105RG478M6R3DM2A	12.5 x 26.5	0.184	1.127
5,600	105RG568M6R3DT2A	12.5 x 33.5	0.135	1.442
8,200	105RG828M6R3DS2A	12.5 x 42.5	0.096	1.905
8,200	105RG828M6R3EK2A	16.0 x 25.0	0.114	1.633
12,000	105RG129M6R3EN2A	16.0 x 32.0	0.085	2.140
15,000	105RG159M6R3ER2A	16.0 x 36.0	0.068	2.450
15,000	105RG159M6R3EU2A	16.0 x 40.0	0.068	2.662
18,000	105RG189M6R3FR2A	18.0 x 36.0	0.058	2.867
22,000	105RG229M6R3FV2A	18.0 x 40.0	0.050	3.229
10 VOLTS DC WORKING; 12.5 VOLTS DC SURGE				
2,200	105RG228M010DG2A	12.5 x 20.0	0.321	0.766
2,700	105RG278M010DK2A	12.5 x 25.0	0.218	1.012
3,300	105RG338M010DM2A	12.5 x 26.5	0.189	1.113
4,700	105RG478M010DT2A	12.5 x 33.5	0.134	1.442
5,600	105RG568M010DS2A	12.5 x 42.5	0.099	1.877
5,600	105RG568M010EK2A	16.0 x 25.0	0.119	1.596
8,200	105RG828M010EN2A	16.0 x 32.0	0.085	2.091
10,000	105RG109M010ER2A	16.0 x 36.0	0.068	2.449
15,000	105RG159M010EU2A	16.0 x 40.0	0.059	2.724
15,000	105RG159M010FR2A	18.0 x 36.0	0.059	2.835
18,000	105RG189M010FV2A	18.0 x 40.0	0.055	3.122
16 VOLTS DC WORKING; 20 VOLTS DC SURGE				
1,500	105RG158M016DG2A	12.5 x 20.0	0.321	0.766
2,200	105RG228M016DK2A	12.5 x 25.0	0.210	1.030
2,700	105RG278M016DM2A	12.5 x 26.5	0.187	1.119
3,300	105RG338M016DT2A	12.5 x 33.5	0.135	1.439
5,600	105RG568M016DS2A	12.5 x 42.5	0.095	1.914
3,900	105RG398M016EK2A	16.0 x 25.0	0.124	1.569
6,800	105RG688M016EN2A	16.0 x 32.0	0.082	2.124
7,800	105RG788M016ER2A	16.0 x 36.0	0.070	2.419
8,200	105RG828M016EU2A	16.0 x 40.0	0.063	2.640
10,000	105RG109M016FR2A	18.0 x 36.0	0.060	2.811
12,000	105RG129M016FV2A	18.0 x 40.0	0.050	3.217
25 VOLTS DC WORKING; 32 VOLTS DC SURGE				
1,000	105RG108M025DG2A	12.5 x 20.0	0.325	0.761
1,600	105RG168M025DK2A	12.5 x 25.0	0.221	1.003
1,800	105RG188M025DM2A	12.5 x 26.5	0.196	1.093
2,700	105RG278M025DT2A	12.5 x 33.5	0.145	1.391
3,900	105RG398M025DS2A	12.5 x 42.5	0.096	1.899
3,300	105RG338M025EK2A	16.0 x 25.0	0.120	1.594
4,700	105RG478M025EN2A	16.0 x 32.0	0.094	1.985
5,600	105RG568M025ER2A	16.0 x 36.0	0.070	2.412
6,800	105RG688M025EU2A	16.0 x 40.0	0.062	2.667
6,800	105RG688M025FR2A	18.0 x 36.0	0.068	2.637
8,200	105RG828M025FV2A	18.0 x 40.0	0.053	3.139
35 VOLTS DC WORKING; 44 VOLTS DC SURGE				
680	105RG687M035DG2A	12.5 x 20.0	0.391	0.694
1,000	105RG108M035DK2A	12.5 x 25.0	0.257	0.931
1,200	105RG128M035DM2A	12.5 x 26.5	0.216	1.041
1,500	105RG158M035DT2A	12.5 x 33.5	0.160	1.324

STANDARD RATINGS FOR TYPE 105RG

Rated Capacitance (μF)	Catalog Number	Nominal Case Size D x L (mm)	Maximum ESR +25°C 120Hz (Ω)	Maximum Ripple Current +85°C 120Hz (A _{rms})
35 VOLTS DC WORKING; 44 VOLTS DC SURGE (CONTINUED)				
2,200	105RG228M035DS2A	12.5 x 42.5	0.111	1.771
1,800	105RG188M035EK2A	16.0 x 25.0	0.143	1.458
2,700	105RG278M035EN2A	16.0 x 32.0	0.104	1.891
3,300	105RG338M035ER2A	16.0 x 36.0	0.084	2.203
3,900	105RG398M035EU2A	16.0 x 40.0	0.078	2.385
3,900	105RG398M035FR2A	18.0 x 36.0	0.078	2.458
5,600	105RG568M035FV2A	18.0 x 40.0	0.063	2.908
50 VOLTS DC WORKING; 63 VOLTS DC SURGE				
390	105RG397M050DG2A	12.5 x 20.0	0.434	0.660
560	105RG567M050DK2A	12.5 x 25.0	0.336	0.821
680	105RG687M050DM2A	12.5 x 26.5	0.261	0.947
1,000	105RG108M050DT2A	12.5 x 33.5	0.180	1.247
1,200	105RG128M050DS2A	12.5 x 42.5	0.125	1.672
1,200	105RG128M050EK2A	16.0 x 25.0	0.157	1.391
1,800	105RG188M050EN2A	16.0 x 32.0	0.109	1.840
2,200	105RG228M050ER2A	16.0 x 36.0	0.089	2.138
2,200	105RG228M050EU2A	16.0 x 40.0	0.080	2.341
2,700	105RG278M050FR2A	18.0 x 36.0	0.079	2.443
3,300	105RG338M050FV2A	18.0 x 40.0	0.064	2.846
63 VOLTS DC WORKING; 80 VOLTS DC SURGE				
330	105RG337M063DG2A	12.5 x 20.0	0.509	0.609
470	105RG477M063DK2A	12.5 x 25.0	0.330	0.822
560	105RG567M063DM2A	12.5 x 26.5	0.312	0.867
680	105RG687M063DT2A	12.5 x 33.5	0.263	1.071
1,000	105RG108M063DS2A	12.5 x 42.5	0.179	1.449
1,000	105RG108M063EK2A	16.0 x 25.0	0.179	1.305
1,500	105RG158M063EN2A	16.0 x 32.0	0.147	1.689
1,800	105RG188M063ER2A	16.0 x 36.0	0.123	1.941
2,200	105RG228M063EU2A	16.0 x 40.0	0.098	2.168
2,200	105RG228M063FR2A	18.0 x 36.0	0.098	2.258
2,700	105RG278M063FV2A	18.0 x 40.0	0.081	2.620
100 VOLTS DC WORKING; 125 VOLTS DC SURGE				
100	105RG107M100DG2A	12.5 x 20.0	1.617	0.437
150	105RG157M100DK2A	12.5 x 25.0	1.290	0.590
180	105RG187M100DM2A	12.5 x 26.5	1.080	0.636
270	105RG277M100DT2A	12.5 x 33.5	0.735	0.818
330	105RG337M100DS2A	12.5 x 42.5	0.599	1.106
330	105RG337M100EK2A	16.0 x 25.0	0.490	0.972
390	105RG397M100EN2A	16.0 x 32.0	0.410	1.221
470	105RG477M100ER2A	16.0 x 36.0	0.343	1.408
560	105RG567M100EU2A	16.0 x 40.0	0.343	1.589
560	105RG567M100FR2A	18.0 x 36.0	0.284	1.641
820	105RG827M100FV2A	18.0 x 40.0	0.217	1.965
160 VOLTS DC WORKING; 185 VOLTS DC SURGE				
47	105RG476M160DG2A	12.5 x 20.0	4.900	0.234
56	105RG566M160DK2A	12.5 x 25.0	3.430	0.298
68	105RG686M160DM2A	12.5 x 26.5	2.890	0.337
100	105RG107M160DT2A	12.5 x 33.5	1.960	0.450
150	105RG157M160DS2A	12.5 x 42.5	1.620	0.617
120	105RG127M160EK2A	16.0 x 25.0	1.420	0.486
220	105RG227M160ER2A	16.0 x 32.0	0.900	0.786

STANDARD RATINGS FOR TYPE 105RG

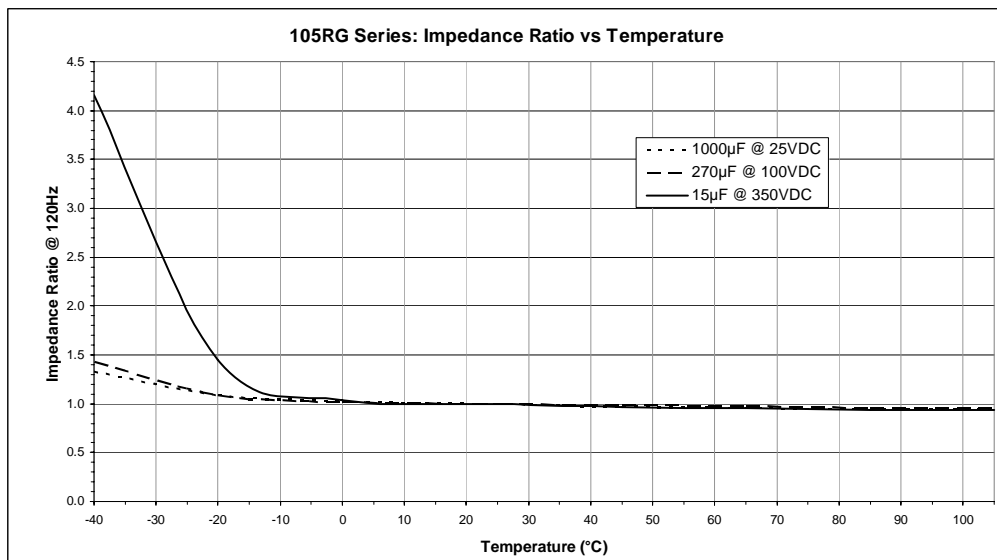
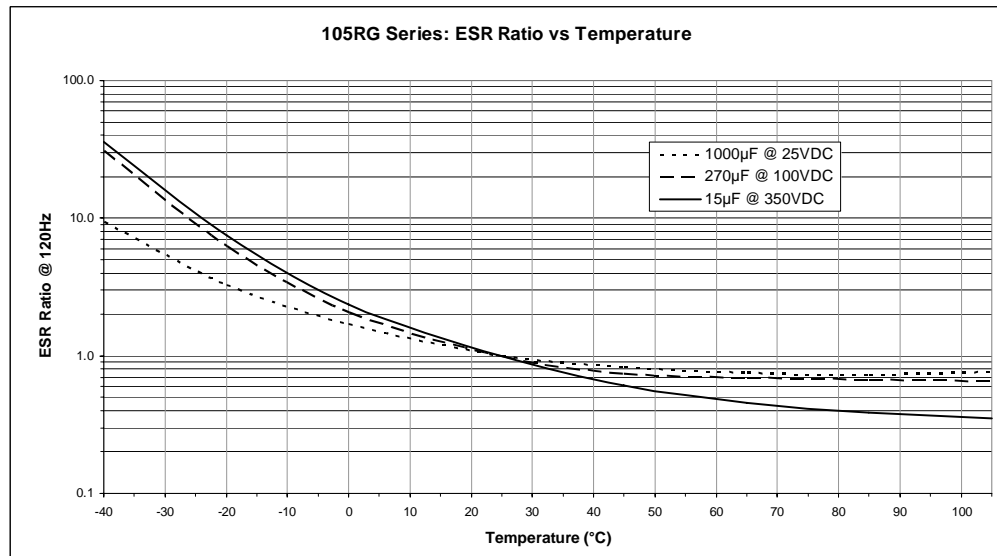
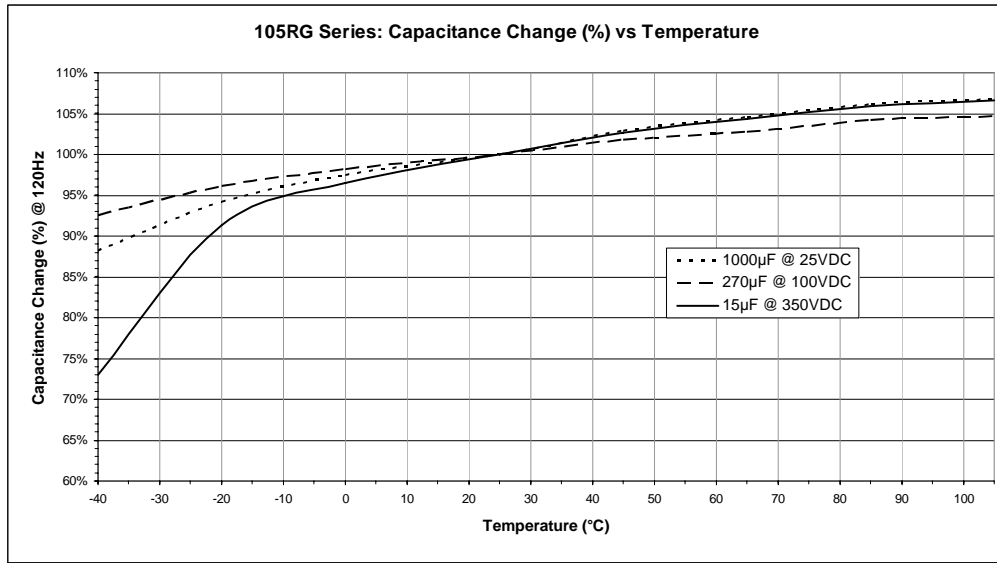
Rated Capacitance (μF)	Catalog Number	Nominal Case Size D x L (mm)	Maximum ESR +25°C 120Hz (Ω)	Maximum Ripple Current +85°C 120Hz (A _{rms})
160 VOLTS DC WORKING; 185 VOLTS DC SURGE (CONTINUED)				
180	105RG187M160EN2A	16.0 x 36.0	1.080	0.672
270	105RG277M160EU2A	16.0 x 40.0	0.735	0.872
270	105RG277M160FR2A	18.0 x 36.0	0.735	0.956
330	105RG337M160FV2A	18.0 x 40.0	0.598	1.110
200 VOLTS DC WORKING; 225 VOLTS DC SURGE				
33	105RG336M200DG2A	12.5 x 20.0	5.780	0.219
56	105RG566M200DK2A	12.5 x 25.0	3.530	0.304
68	105RG686M200DM2A	12.5 x 26.5	2.940	0.342
82	105RG826M200DT2A	12.5 x 33.5	2.250	0.438
120	105RG127M200DS2A	12.5 x 42.5	1.620	0.564
82	105RG826M200EK2A	16.0 x 25.0	1.620	0.452
120	105RG127M200EN2A	16.0 x 32.0	1.350	0.608
150	105RG157M200ER2A	16.0 x 36.0	1.080	0.715
180	105RG187M200EU2A	16.0 x 40.0	0.740	0.808
220	105RG227M200FR2A	18.0 x 36.0	0.740	0.908
270	105RG277M200FV2A	18.0 x 40.0	0.607	1.027
250 VOLTS DC WORKING; 300 VOLTS DC SURGE				
33	105RG336M250DG2A	12.5 x 20.0	4.900	0.214
47	105RG476M250DK2A	12.5 x 25.0	3.430	0.282
56	105RG566M250DM2A	12.5 x 26.5	2.890	0.316
68	105RG686M250DT2A	12.5 x 33.5	2.370	0.384
82	105RG826M250DS2A	12.5 x 42.5	1.960	0.477
68	105RG686M250EK2A	16.0 x 25.0	2.370	0.396
100	105RG107M250EN2A	16.0 x 32.0	1.620	0.535
120	105RG127M250ER2A	16.0 x 36.0	1.960	0.616
150	105RG157M250EU2A	16.0 x 40.0	1.610	0.715
180	105RG187M250FR2A	18.0 x 36.0	0.899	0.811
220	105RG227M250FV2A	18.0 x 40.0	0.735	0.942
300 VOLTS DC WORKING; 365 VOLTS DC SURGE				
18	105RG186M300DG2A	12.5 x 20.0	10.39	0.135
27	105RG276M300DK2A	12.5 x 25.0	6.776	0.181
33	105RG336M300DM2A	12.5 x 26.5	5.930	0.199
47	105RG476M300DT2A	12.5 x 33.5	5.000	0.246
56	105RG566M300DS2A	12.5 x 42.5	3.430	0.319
47	105RG476M300EK2A	16.0 x 25.0	3.491	0.295
68	105RG686M300EN2A	16.0 x 32.0	2.520	0.384
82	105RG826M300ER2A	16.0 x 36.0	2.200	0.431
100	105RG107M300EU2A	16.0 x 40.0	2.000	0.472
120	105RG127M300FR2A	18.0 x 36.0	1.500	0.562
150	105RG157M300FV2A	18.0 x 40.0	1.196	0.660
350 VOLTS DC WORKING; 400 VOLTS DC SURGE				
15	105RG156M350DG2A	12.5 x 20.0	10.78	0.132
22	105RG226M350DK2A	12.5 x 25.0	7.350	0.174
27	105RG276M350DM2A	12.5 x 26.5	6.270	0.193
39	105RG396M350DT2A	12.5 x 33.5	4.347	0.254
56	105RG566M350DS2A	12.5 x 42.5	2.990	0.341
47	105RG476M350EK2A	16.0 x 25.0	3.350	0.302
68	105RG686M350EN2A	16.0 x 32.0	2.600	0.378
82	105RG826M350ER2A	16.0 x 36.0	2.000	0.452
100	105RG107M350EU2A	16.0 x 40.0	1.700	0.508
120	105RG127M350FR2A	18.0 x 36.0	1.450	0.572
120	105RG127M350FV2A	18.0 x 40.0	1.300	0.634

STANDARD RATINGS FOR TYPE 105RG

Rated Capacitance (μF)	Catalog Number	Nominal Case Size D x L (mm)	Maximum ESR +25°C 120Hz (Ω)	Maximum Ripple Current +85°C 120Hz (A_{rms})
400 VOLTS DC WORKING; 450 VOLTS DC SURGE				
10	105RG106M400DG2A	12.5 x 20.0	20.00	0.106
15	105RG156M400DK2A	12.5 x 25.0	10.00	0.149
18	105RG186M400DM2A	12.5 x 26.5	9.500	0.157
27	105RG276M400DT2A	12.5 x 33.5	8.190	0.206
39	105RG396M400DS2A	12.5 x 42.5	5.900	0.278
33	105RG336M400EK2A	16.0 x 25.0	5.040	0.246
47	105RG476M400EN2A	16.0 x 32.0	3.464	0.327
56	105RG566M400ER2A	16.0 x 36.0	2.800	0.382
68	105RG686M400EU2A	16.0 x 40.0	2.370	0.430
82	105RG826M400FR2A	18.0 x 36.0	1.960	0.492
100	105RG107M400FV2A	18.0 x 40.0	1.600	0.571
450 VOLTS DC WORKING; 500 VOLTS DC SURGE				
8.2	105RG825M450DG2A	12.5 x 20.0	16.17	0.108
12	105RG126M450DK2A	12.5 x 25.0	10.80	0.144
15	105RG156M450DM2A	12.5 x 26.5	9.425	0.158
22	105RG226M450DT2A	12.5 x 33.5	7.000	0.200
27	105RG276M450DS2A	12.5 x 42.5	4.890	0.267
22	105RG226M450EK2A	16.0 x 25.0	6.000	0.225
33	105RG336M450EN2A	16.0 x 32.0	4.000	0.304
47	105RG476M450ER2A	16.0 x 36.0	3.200	0.357
56	105RG566M450EU2A	16.0 x 40.0	2.900	0.389
56	105RG566M450FR2A	18.0 x 36.0	2.500	0.436
68	105RG686M450FV2A	18.0 x 40.0	2.000	0.511

105RG TYPICAL PERFORMANCE PROFILES

TEMPERATURE CHARACTERISTICS



105RG TYPICAL PERFORMANCE PROFILES

FREQUENCY CHARACTERISTICS

