

# GPR Series

## General Purpose Radial Capacitors

**multicomp** PRO

**RoHS  
Compliant**



### Features

- General purpose radial leaded electrolytic
- Supplied loose with straight leads
- Wide CV value range for general purpose
- Safety vent construction products, ECR series are guaranteed 2000 hours at 85°C

### Specifications

Item	Performance																					
Operating Temperature Range	-40°C to +85°C																					
Rated Working Voltage Range	16 to 100V dc																					
Nominal Capacitance Range	0.47µF to 4700µF																					
Capacitance Tolerance	± 20% (at +20°C , 120Hz)																					
Leakage Current	I=0.01CV +3µA maximum, Whichever is greater after 3 minutes. I: Leakage Current (µA) C: Rated Capacitance (µF) V: Working Voltage (V)																					
Dissipation Factor (tan δ) (120Hz\+20°C)	<table border="1"> <thead> <tr> <th>Working Voltage</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td><b>tan δ max.</b></td> <td>0.17</td> <td>0.15</td> <td>0.12</td> <td>0.1</td> <td>0.09</td> <td>0.08</td> </tr> </tbody> </table> <p>Add 0.02 per 1,000µF for more than 1,000µF</p>	Working Voltage	16	25	35	50	63	100	<b>tan δ max.</b>	0.17	0.15	0.12	0.1	0.09	0.08							
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Ripple Current	Refer to standard products table (120Hz, +85°C) Correction factor for frequency <table border="1"> <thead> <tr> <th>Frequency (Hz)</th> <th>50/60</th> <th>120</th> <th>1K</th> <th>10K</th> </tr> </thead> <tbody> <tr> <td>Correction factor(Multiplier)</td> <td>0.7</td> <td>1</td> <td>1.3</td> <td>1.7</td> </tr> </tbody> </table>	Frequency (Hz)	50/60	120	1K	10K	Correction factor(Multiplier)	0.7	1	1.3	1.7											
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Characteristics at low temperature (stability at 120 Hz)	<table border="1"> <thead> <tr> <th>Working Voltage</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>-25°C/+20°C</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>-40°C/+20°C</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table> <p>For capacitance value &gt;1,000 µF, Add 0.5 per another 1,000 µF for -25°C/+25°C. Add 1 per another 1,000µF for -40°C/+20°C</p>	Working Voltage	16	25	35	50	63	100	-25°C/+20°C	2	2	2	2	2	2	-40°C/+20°C	4	4	3	3	3	3
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High Temperature Loading	After 2,000 hrs. application of DC rated working voltage at +85°C, The capacitor shall meet the following limits: Post test requirements at +20°C <table border="1"> <tbody> <tr> <td>Leakage current</td> <td>≤ the initial specified value</td> </tr> <tr> <td>Capacitance change</td> <td>≤ ±20% of initial measured value</td> </tr> <tr> <td>Dissipation Factor(tan δ)</td> <td>≤ 150% of initial specified value</td> </tr> </tbody> </table>	Leakage current	≤ the initial specified value	Capacitance change	≤ ±20% of initial measured value	Dissipation Factor(tan δ)	≤ 150% of initial specified value															
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Shelf Life	After storage for 500hrs. at +85°C with no voltage applied. Post test requirements at +20°C same limits as high temperature loading.																					

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### Case Size Table

W.V.(SV)	16	25	35	50	63	100
$\mu$ F	(20)	(32)	(44)	(63)	(79)	(125)
0.47	-	-	-	5 × 11	-	-
1	-	-	-	-	-	5 × 11
10	5 × 11	-	-	5 × 11	-	6.3 × 11
22		-	-	-	6.3 × 11	-
33		-	6.3 × 12	-	-	-
47		-		6 × 12	-	10 × 16
100	6.3 × 12	6.3 × 12	8 × 12	-	-	13 × 21
220	6 × 12	-	-	10 × 17	10 × 21	16 × 26
330	8 × 12	-	10 × 16	-	-	-
470		10 × 17	10 × 21	-	-	-
1000	10 × 17	10 × 21	13 × 22	-	16 × 32	-

### Permissible Ripple Current

W.V. (SV)	16	25	35	50	63	100
$\mu$ F	(20)	(32)	(44)	(63)	(79)	(125)
0.47	-	-	-	8	-	-
1	-	-	-	-	-	15
10	39	-	-	39	-	61
22	50	-	-	-	85	-
33	58	-	75	-	-	-
47	78	-	102	112	-	190
100	123	142	140	-	-	320
220	232	-	-	395	460	665
330	310	-	435	-	-	-
470	390	460	560	-	-	-
1000	690	850	875	-	1435	-

Max. ripple current: mA (rms) (at 85°C. 120HZ)

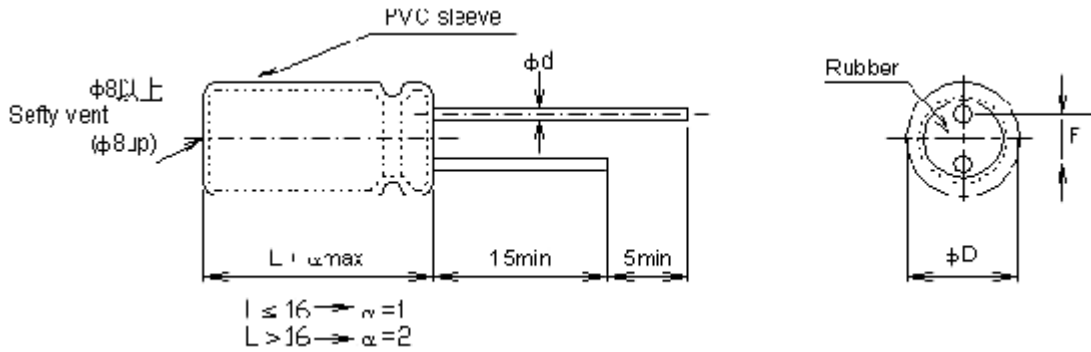
Dimensions : Millimetres

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### Diagram of Dimensions



DØ (+0.5Max.)	5	6	6.3	8	10	13	16
F (±0.5)	2	2.5	2.5	3.5	5	5	7.5
dØ (±0.02)	0.5	0.5	0.5	0.6	0.6	0.6	0.8

Dimensions : Millimetres

### Part Number Table

Description	Part Number
Electrolytic Capacitor, 100µF, 100V, MCGPR Series, ±20%, Radial Leaded, 13mm	MCGPR100V107M13X21-RH
Electrolytic Capacitor, 100µF, 25V, MCGPR Series, ±20%, Radial Leaded, 6.3mm	MCGPR25V107M6.3X11-RH
Electrolytic Capacitor, 4.7µF, 50V, MCGPR Series, ±20%, Radial Leaded, 5mm	MCGPR50V475M5X11-RH
Electrolytic Capacitor, 10µF, 63V, MCGPR Series, ±20%, Radial Leaded, 5mm	MCGPR63V106M5X11-RH

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