

Large Snap-In Electrolytic Capacitors

HPR Series



Features:

- Highly reliable capacitors that has characteristics of high temperature 105°C, and can withstand high ripple current
- Suitable for filter of industrial equipment, such as automatic machines, computers and switching power supplies, etc

Specifications:

No.	Item	Performance																																																							
1	Operating Temperature Range	-40°C to+105°C				-25°C to+105°C																																																			
2	Rated Working Voltage Range	10 - 100V DC				160 - 450V DC																																																			
3	Nominal Capacitance Range	330 - 68,000μF				33 - 2,200μF																																																			
4	Capacitance Tolerance	±20% (at+20°C ,120Hz)																																																							
5	Leakage Current	I=0.02CV or 3,000(μA) max Whichever is greater after 3 minutes. I: Leakage Current (μA) C: Rated Capacitance (μF) V: Working Voltage(V)																																																							
6	Dissipation Factor(tanδ) (120Hz\+20°C)	<table><tr><th>W.V. μF</th><th>10-16</th><th>25-35</th><th>50-63</th><th>80-100</th><th>160-250</th><th>315-400</th></tr><tr><td>33-470</td><td></td><td></td><td></td><td></td><td>0.15</td><td>0.2</td></tr><tr><td>560-3,300</td><td>0.25</td><td>0.2</td><td>0.2</td><td>0.2</td><td>0.15</td><td>0.2</td></tr><tr><td>4,700-6,800</td><td>0.35</td><td>0.3</td><td>0.3</td><td>0.25</td><td></td><td></td></tr><tr><td>10,000-22,000</td><td>0.4</td><td>0.35</td><td>0.3</td><td></td><td></td><td></td></tr><tr><td>27,000-47,000</td><td>0.45</td><td>0.4</td><td>0.35</td><td></td><td></td><td></td></tr><tr><td>56,000-68,000</td><td>0.5</td><td>0.45</td><td></td><td></td><td></td><td></td></tr></table> Less than the value under table							W.V. μF	10-16	25-35	50-63	80-100	160-250	315-400	33-470					0.15	0.2	560-3,300	0.25	0.2	0.2	0.2	0.15	0.2	4,700-6,800	0.35	0.3	0.3	0.25			10,000-22,000	0.4	0.35	0.3				27,000-47,000	0.45	0.4	0.35				56,000-68,000	0.5	0.45				
W.V. μF	10-16	25-35	50-63	80-100	160-250	315-400																																																			
33-470					0.15	0.2																																																			
560-3,300	0.25	0.2	0.2	0.2	0.15	0.2																																																			
4,700-6,800	0.35	0.3	0.3	0.25																																																					
10,000-22,000	0.4	0.35	0.3																																																						
27,000-47,000	0.45	0.4	0.35																																																						
56,000-68,000	0.5	0.45																																																							
7	(at 120 Hz) Characteristics at low temperature (stability at 120 Hz)	<table><tr><th>Working Voltage (V)</th><th>16</th><th>25</th><th>35</th><th>50</th><th>63</th><th>100</th><th>250</th><th>400</th></tr><tr><td>-25°C/+20°C</td><td>6</td><td>6</td><td>4</td><td>3</td><td>3</td><td>4</td><td>4</td><td>4</td></tr><tr><td>-40°C/+20°C</td><td>15</td><td>10</td><td>8</td><td>6</td><td>6</td><td>6</td><td></td><td></td></tr></table>									Working Voltage (V)	16	25	35	50	63	100	250	400	-25°C/+20°C	6	6	4	3	3	4	4	4	-40°C/+20°C	15	10	8	6	6	6																						
Working Voltage (V)	16	25	35	50	63	100	250	400																																																	
-25°C/+20°C	6	6	4	3	3	4	4	4																																																	
-40°C/+20°C	15	10	8	6	6	6																																																			

Large Snap-In Electrolytic Capacitors

HPR Series



Specifications:

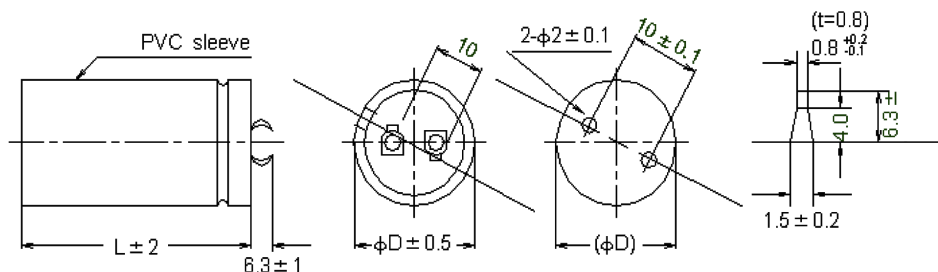
8	Ripple Current	Refer to standard products table (120Hz,+105°C). Correction factor for frequency. <table><tr><th>Ambient Temp.</th><th>Multiplying Factor</th></tr><tr><td>45°C & under</td><td>2.55</td></tr><tr><td>60°C</td><td>2.25</td></tr><tr><td>70°C</td><td>1.8</td></tr><tr><td>105°C</td><td>1</td></tr></table> <table><tr><th rowspan="2">Frequency</th><th colspan="4">Multiplying Factor</th></tr><tr><th>10-50V</th><th>63-100V</th><th>160-250V</th><th>315-400V</th></tr><tr><td>60Hz</td><td>0.9</td><td>0.85</td><td>0.8</td><td>0.9</td></tr><tr><td>120Hz</td><td>1</td><td>1</td><td>1</td><td>1</td></tr><tr><td>300Hz</td><td>1.03</td><td>1.07</td><td>1.15</td><td>1.1</td></tr><tr><td>1kHz</td><td>1.05</td><td>1.13</td><td>1.25</td><td>1.2</td></tr><tr><td>10kHz</td><td>1.1</td><td>1.19</td><td>1.35</td><td>1.3</td></tr></table>	Ambient Temp.	Multiplying Factor	45°C & under	2.55	60°C	2.25	70°C	1.8	105°C	1	Frequency	Multiplying Factor				10-50V	63-100V	160-250V	315-400V	60Hz	0.9	0.85	0.8	0.9	120Hz	1	1	1	1	300Hz	1.03	1.07	1.15	1.1	1kHz	1.05	1.13	1.25	1.2	10kHz	1.1	1.19	1.35	1.3
Ambient Temp.	Multiplying Factor																																													
45°C & under	2.55																																													
60°C	2.25																																													
70°C	1.8																																													
105°C	1																																													
Frequency	Multiplying Factor																																													
	10-50V	63-100V	160-250V	315-400V																																										
60Hz	0.9	0.85	0.8	0.9																																										
120Hz	1	1	1	1																																										
300Hz	1.03	1.07	1.15	1.1																																										
1kHz	1.05	1.13	1.25	1.2																																										
10kHz	1.1	1.19	1.35	1.3																																										
9	High Temperature Loading	After 2000hrs. application of DC rated working voltage at +105°C, the capacitor shall meet the following limits: Post test requirements at +20°C <table><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(tanδ)</td><td>≤200% of initial specified value</td></tr></table>	Leakage current	≤ the Initial specified value	Capacitance change	≤±20% of initial measured value	Dissipation Factor(tanδ)	≤200% of initial specified value																																						
Leakage current	≤ the Initial specified value																																													
Capacitance change	≤±20% of initial measured value																																													
Dissipation Factor(tanδ)	≤200% of initial specified value																																													
10	Shelf Life	After storage for 500hrs. at +105°C with no voltage applied. Post test requirements at +20°C Same limits as high temperature loading.																																												

Large Snap-In Electrolytic Capacitors

HPR Series



Dimension:



Dimensions : Millimetres

Case Size Table & Permissible Ripple Current

Case Size : ØDxL(mm)

Max ripple current : A (rms)

W. V.	Capacitance (µF)	Case Size	R. C.
16 (20)	3,300	22 × 25	0.98
	4,700	22 × 25	1.2
	6,800	22 × 25	1.5
	8,200	22 × 30	2
	10,000	22 × 32	2.33
	12,000	22 × 35	2.8
	15,000	22 × 36	3.1
	18,000	25 × 35	2.7
	22,000	22 × 41	3.3
	27,000	30 × 31	3.2
	33,000	30 × 45	4.1
	39,000	30 × 50	4.6
	47,000	35 × 50	5.3
	56,000	35 × 55	5.9
25 (32)	2,200	22 × 26	0.86
	3,300	22 × 26	1.15
	4,700	22 × 26	1.5
	5,600	22 × 31	1.9
	6,800	22 × 31	2.2
	8,200	22 × 35	2.5
	10,000	25 × 31	2.5
	12,000	25 × 31	3
	15,000	30 × 36	3.7
	18,000	25 × 41	4
	22,000	30 × 45	4.1
	27,000	30 × 45	4.3
	33,000	30 × 51	5.1

Large Snap-In Electrolytic Capacitors

HPR Series



W. V.	Capacitance (μF)	Case Size	R. C.
35 (44)	1,500	22 × 26	1.1
	2,200	22 × 26	1.2
	3,300	22 × 26	1.6
	3,900	22 × 31	1.86
	4,700	22 × 32	2
	5,600	22 × 36	2.5
	6,800	25 × 31	2.3
	8,200	22 × 41	2.9
	10,000	25 × 32	3.2
	12,000	25 × 51	3.7
	15,000	30 × 45	4.1
	18,000	30 × 50	4.3
	22,000	35 × 46	4.4
50 (63)	1,000	22 × 26	0.7
	1,500	22 × 26	0.9
	1,800	22 × 26	1.3
	2,200	22 × 26	1.3
	2,700	22 × 31	1.6
	3,300	25 × 30	1.75
	3,900	25 × 32	2.1
	4,700	25 × 32	2.2
	5,600	25 × 35	2.28
	6,800	25 × 41	2.5
	8,200	25 × 50	3
	10,000	35 × 42	3.4
63 (79)	1,000	25 × 25	0.65
	1,200	22 × 26	0.82
	1,500	22 × 31	0.92
	2,200	25 × 26	1.2
	2,700	25 × 26	1.5
	3,300	25 × 26	1.8
	3,900	25 × 41	2.5
	4,700	25 × 41	2.8
	5,600	30 × 41	3.1
	6,800	30 × 41	3.7
	8,200	30 × 51	4.2
	10,000	30 × 51	4.8

Large Snap-In Electrolytic Capacitors

HPR Series



W. V.	Capacitance (μF)	Case Size	R. C.
100 (125)	330	22 × 26	0.45
	470	22 × 26	0.66
	560	22 × 26	0.8
	680	22 × 26	0.8
	820	25 × 31	1
	1,000	22 × 32	1.1
	1,200	25 × 36	1.2
	1,500	25 × 41	1.4
	1,800	25 × 41	2
	2,200	25 × 46	2.77
	2,700	35 × 37	3.4
	3,300	35 × 45	3.75
	3,900	35 × 46	4.2
	4,700	35 × 52	4.53
250 (300)	100	22 × 26	0.36
	120	22 × 26	0.37
	150	22 × 26	0.48
	180	25 × 26	0.55
	220	22 × 32	0.67
	270	22 × 32	0.8
	330	22 × 41	0.95
	390	25 × 36	1
	470	25 × 41	1.1
	560	25 × 51	1.4
	680	30 × 45	1.6
	820	35 × 45	1.6
	1,000	35 × 47	1.78
400 (450)	47	25 × 25	0.42
	56	22 × 26	0.57
	68	22 × 25	0.6
	82	22 × 25	0.69
	100	22 × 32	0.68
	120	25 × 30	0.75
	150	25 × 35	0.79
	180	25 × 35	0.93
	220	25 × 41	1
	270	25 × 46	1.1
	330	30 × 41	1.1
	390	35 × 47	1.28
	470	35 × 51	1.34

Large Snap-In Electrolytic Capacitors

HPR Series



Part Number Table

Description	Part Number
Cap, Alu Elec, 3300µF, 16V, Snap In	MCHPR16V338M22X25
Cap, Alu Elec, 4700µF, 16V, Snap In	MCHPR16V478M22X25
Cap, Alu Elec, 6800µF, 16V, Snap In	MCHPR16V688M22X25
Cap, Alu Elec, 8200µF, 16V, Snap In	MCHPR16V828M22X30
Cap, Alu Elec, 10000µF, 16V, Snap In	MCHPR16V109M22X32
Cap, Alu Elec, 12000µF, 16V, Snap In	MCHPR16V129M22X35
Cap, Alu Elec, 15000µF, 16V, Snap In	MCHPR16V159M22X36
Cap, Alu Elec, 18000µF, 16V, Snap In	MCHPR16V189M25X35
Cap, Alu Elec, 22000µF, 16V, Snap In	MCHPR16V229M22X41
Cap, Alu Elec, 27000µF, 16V, Snap In	MCHPR16V279M30X31
Cap, Alu Elec, 33000µF, 16V, Snap In	MCHPR16V339M30X45
Cap, Alu Elec, 39000µF, 16V, Snap In	MCHPR16V399M30X50
Cap, Alu Elec, 47000µF, 16V, Snap In	MCHPR16V479M35X50
Cap, Alu Elec, 56000µF, 16V, Snap In	MCHPR16V569M35X55
Cap, Alu Elec, 2200µF, 25V, Snap In	MCHPR25V228M22X26
Cap, Alu Elec, 3300µF, 25V, Snap In	MCHPR25V338M22X26
Cap, Alu Elec, 4700µF, 25V, Snap In	MCHPR25V478M22X26
Cap, Alu Elec, 5600µF, 25V, Snap In	MCHPR25V568M22X31
Cap, Alu Elec, 6800µF, 25V, Snap In	MCHPR25V688M22X31
Cap, Alu Elec, 8200µF, 25V, Snap In	MCHPR25V828M22X35
Cap, Alu Elec, 10000µF, 25V, Snap In	MCHPR25V109M25X31
Cap, Alu Elec, 12000µF, 25V, Snap In	MCHPR25V129M25X31
Cap, Alu Elec, 15000µF, 25V, Snap In	MCHPR25V159M30X36
Cap, Alu Elec, 18000µF, 25V, Snap In	MCHPR25V189M25X41
Cap, Alu Elec, 22000µF, 25V, Snap In	MCHPR25V229M30X45
Cap, Alu Elec, 27000µF, 25V, Snap In	MCHPR25V279M30X45
Cap, Alu Elec, 33000µF, 25V, Snap In	MCHPR25V339M30X51
Cap, Alu Elec, 1500µF, 35V, Snap In	MCHPR35V158M22X26
Cap, Alu Elec, 2200µF, 35V, Snap In	MCHPR35V228M22X26
Cap, Alu Elec, 3300µF, 35V, Snap In	MCHPR35V338M22X26
Cap, Alu Elec, 3900µF, 35V, Snap In	MCHPR35V398M22X31
Cap, Alu Elec, 4700µF, 35V, Snap In	MCHPR35V478M22X32
Cap, Alu Elec, 5600µF, 35V, Snap In	MCHPR35V568M22X36
Cap, Alu Elec, 6800µF, 35V, Snap In	MCHPR35V688M25X31
Cap, Alu Elec, 8200µF, 35V, Snap In	MCHPR35V828M22X41
Cap, Alu Elec, 10000µF, 35V, Snap In	MCHPR35V109M25X32

Large Snap-In Electrolytic Capacitors

HPR Series



Description	Part Number
Cap, Alu Elec, 12000µF, 35V, Snap In	MCHPR35V129M25X51
Cap, Alu Elec, 15000µF, 35V, Snap In	MCHPR35V159M30X45
Cap, Alu Elec, 18000µF, 35V, Snap In	MCHPR35V189M30X50
Cap, Alu Elec, 22000µF, 35V, Snap In	MCHPR35V229M35X46
Cap, Alu Elec, 1000µF, 50V, Snap In	MCHPR50V108M22X26
Cap, Alu Elec, 1500µF, 50V, Snap In	MCHPR50V158M22X26
Cap, Alu Elec, 1800µF, 50V, Snap In	MCHPR50V188M22X26
Cap, Alu Elec, 2200µF, 50V, Snap In	MCHPR50V228M22X26
Cap, Alu Elec, 2700µF, 50V, Snap In	MCHPR50V278M22X31
Cap, Alu Elec, 3300µF, 50V, Snap In	MCHPR50V338M25X30
Cap, Alu Elec, 3900µF, 50V, Snap In	MCHPR50V398M25X32
Cap, Alu Elec, 4700µF, 50V, Snap In	MCHPR50V478M25X32
Cap, Alu Elec, 5600µF, 50V, Snap In	MCHPR50V568M25X35
Cap, Alu Elec, 6800µF, 50V, Snap In	MCHPR50V688M25X41
Cap, Alu Elec, 8200µF, 50V, Snap In	MCHPR50V828M25X50
Cap, Alu Elec, 10000µF, 50V, Snap In	MCHPR50V109M35X42
Cap, Alu Elec, 1000µF, 63V, Snap In	MCHPR63V108M22X25
Cap, Alu Elec, 1200µF, 63V, Snap In	MCHPR63V128M22X25
Cap, Alu Elec, 1500µF, 63V, Snap In	MCHPR63V158M22X31
Cap, Alu Elec, 2200µF, 63V, Snap In	MCHPR63V228M25X26
Cap, Alu Elec, 2700µF, 63V, Snap In	MCHPR63V278M25X26
Cap, Alu Elec, 3300µF, 63V, Snap In	MCHPR63V338M25X26
Cap, Alu Elec, 3900µF, 63V, Snap In	MCHPR63V398M25X41
Cap, Alu Elec, 4700µF, 63V, Snap In	MCHPR63V478M25X41
Cap, Alu Elec, 5600µF, 63V, Snap In	MCHPR63V568M30X41
Cap, Alu Elec, 6800µF, 63V, Snap In	MCHPR63V688M30X41
Cap, Alu Elec, 8200µF, 63V, Snap In	MCHPR63V828M30X51
Cap, Alu Elec, 10000µF, 63V, Snap In	MCHPR63V109M30X51
Cap, Alu Elec, 330µF, 100V, Snap In	MCHPR100V337M22X26
Cap, Alu Elec, 470µF, 100V, Snap In	MCHPR100V477M22X26
Cap, Alu Elec, 560µF, 100V, Snap In	MCHPR100V567M22X26
Cap, Alu Elec, 680µF, 100V, Snap In	MCHPR100V687M22X26
Cap, Alu Elec, 820µF, 100V, Snap In	MCHPR100V827M25X31
Cap, Alu Elec, 1000µF, 100V, Snap In	MCHPR100V108M22X32
Cap, Alu Elec, 1200µF, 100V, Snap In	MCHPR100V128M25X36
Cap, Alu Elec, 1500µF, 100V, Snap In	MCHPR100V158M25X41

Large Snap-In Electrolytic Capacitors

HPR Series



Description	Part Number
Cap, Alu Elec, 1800µF, 100V, Snap In	MCHPR100V188M25X41
Cap, Alu Elec, 2200µF, 100V, Snap In	MCHPR100V228M25X46
Cap, Alu Elec, 2700µF, 100V, Snap In	MCHPR100V278M35X37
Cap, Alu Elec, 3300µF, 100V, Snap In	MCHPR100V338M35X45
Cap, Alu Elec, 3900µF, 100V, Snap In	MCHPR100V398M35X46
Cap, Alu Elec, 4700µF, 100V, Snap In	MCHPR100V478M35X52
Cap, Alu Elec, 100µF, 250V, Snap In	MCHPR250V107M22X25
Cap, Alu Elec, 120µF, 250V, Snap In	MCHPR250V127M22X25
Cap, Alu Elec, 150µF, 250V, Snap In	MCHPR250V157M22X26
Cap, Alu Elec, 180µF, 250V, Snap In	MCHPR250V187M25X26
Cap, Alu Elec, 220µF, 250V, Snap In	MCHPR250V227M22X32
Cap, Alu Elec, 270µF, 250V, Snap In	MCHPR250V277M22X32
Cap, Alu Elec, 330µF, 250V, Snap In	MCHPR250V337M22X41
Cap, Alu Elec, 390µF, 250V, Snap In	MCHPR250V397M25X36
Cap, Alu Elec, 470µF, 250V, Snap In	MCHPR250V477M25X41
Cap, Alu Elec, 560µF, 250V, Snap In	MCHPR250V567M25X51
Cap, Alu Elec, 680µF, 250V, Snap In	MCHPR250V687M30X45
Cap, Alu Elec, 820µF, 250V, Snap In	MCHPR250V827M35X45
Cap, Alu Elec, 1000µF, 250V, Snap In	MCHPR250V108M35X47
Cap, Alu Elec, 47µF, 400V, Snap In	MCHPR400V476M22X25
Cap, Alu Elec, 56µF, 400V, Snap In	MCHPR400V566M22X25
Cap, Alu Elec, 68µF, 400V, Snap In	MCHPR400V686M22X25
Cap, Alu Elec, 82µF, 400V, Snap In	MCHPR400V826M25X25
Cap, Alu Elec, 100µF, 400V, Snap In	MCHPR400V107M22X32
Cap, Alu Elec, 120µF, 400V, Snap In	MCHPR400V127M25X30
Cap, Alu Elec, 150µF, 400V, Snap In	MCHPR400V157M25X35
Cap, Alu Elec, 180µF, 400V, Snap In	MCHPR400V187M25X35
Cap, Alu Elec, 220µF, 400V, Snap In	MCHPR400V227M25X41
Cap, Alu Elec, 270µF, 400V, Snap In	MCHPR400V277M25X46
Cap, Alu Elec, 330µF, 400V, Snap In	MCHPR400V337M30X41
Cap, Alu Elec, 390µF, 400V, Snap In	MCHPR400V397M35X47
Cap, Alu Elec, 470µF, 400V, Snap In	MCHPR400V477M35X51

Important Notice : This data sheet and its contents (the "Information") belong to the members of the Premier Farnell group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp is the registered trademark of the Group. © Premier Farnell plc 2012.