

PN Series

性能特点 Feature

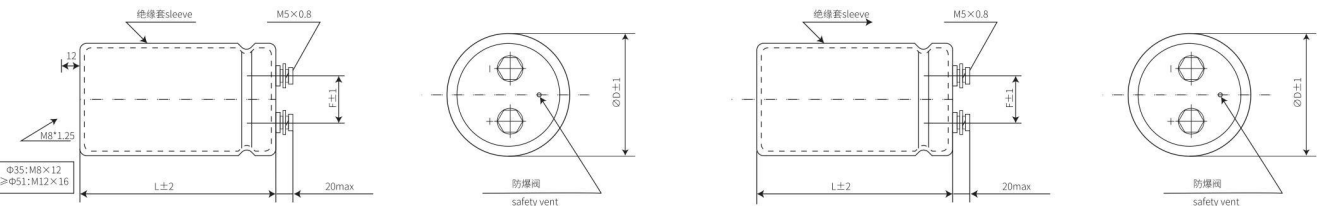
- 耐高纹波,尺寸可调,105°C 2000 小时,可用于大功率电源、UPS 不间断电源、变频器等电路中
High ripple current ,Size may be selected ,Load life of 2000 hours at 85°C
Used large power source,Uninterruptible power supplies ,Frequency converter circuit .etc.
- ROHS 指令已对应完毕
Adapted to the ROHS directive



技术性能 Specifications

项目 Item	特性 Performance Characteristics	
使用温度范围 Operating temperature range	-40~+105°C	-25~+105°C
额定电压范围 Rated voltage range	10~250V	315~450V
标称容量范围 Nominal capacitance range	±20%(120Hz, +20°C)	
漏电流 Leakage current	I ≤ 0.02CV (µA) 或 5mA 5 分钟 取较小值 (at 20°C ,after 5 minutes) (Whichever is smaller)	
损耗角正切值 (tg δ) Dissipation factor (+20°C~120Hz)	小于图中规定的数值 Less than the value specified in the standard products tables	
耐久性 Load life	+105°C 加额定电压 2000 小时, 恢复 16 小时后 : After applying rated voltage for 2000 hours at +105°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ±20% 初始测量值以内 ±20% of the initial measured value 漏电流 Leakage current : ≤ 初始规定值 ≤ the initial specified value 损耗角正切值 Dissipation factor : ≤ 2 倍初始规定值 ≤ 2 times of the initial specified value	
高温储存 Shelf life	+105°C,1000 小时贮存后, 加额定工作电压处理 30 分钟, 恢复 16 小时后 : After storage for 1000 hours at +105°C ,U _n to be applied for 30 minutes and then resumed for 16 hours: 电容量变化率 Capacitance change : ±20% 初始测量值以内 ±20% of the initial measured value 漏 电 流 Leakage current : ≤ 2 倍初始规定值 ≤ 2times the initial specified value 损耗角正切值 Dissipation factor : ≤ 2 倍初始规定值 ≤ 2times of the initial specified value	

尺寸和标记 Dimensions And Marking



ΦD	35	51	63.5	76	89
F	12.7	22	28.6	32	32

环境温度的修正系数 Temperature Correction

环境温度 (°C)	40	55	70	85
电压 (V)				
100	2.1	1.8	1.5	1.0
160~450	2.6	2.2	1.7	1.0

频率的修正系数 Frequency Correction

频率 (Hz)	50	100(120)	300	1K	10K	100K
电压 (V)						
10~50	0.95	1.00	1.04	1.10	1.12	1.15
63~100	0.95	1.00	1.06	1.16	1.20	1.36
160~200	0.90	1.00	1.10	1.20	1.35	1.55
250~450	0.80	1.00	1.10	1.20	1.35	1.55

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标准评级 Standard Ratings

额定纹波电流 Rated Ripple Current (Arms,+105°C,120Hz)

Rated Voltage (V.D.C)	Surge Voltage (V.D.C)	Rated Capacitance (µF)	Dissipation Factor MAX	Ripple Current	Outline Size	
					Code	ΦDxL(mm)
10	13	33000	0.80	4.3	A5	35×50
		39000	0.80	4.7	A5	35×50
		47000	0.80	5.2	A6	35×65
		56000	0.80	6.1	A8	35×80
		68000	0.80	6.7	A8	35×80
		82000	0.80	7.7	A10	35×100
		100000	0.80	8.8	A10	35×100
		120000	0.80	10.0	A12	35×120
		150000	1.00	10.8	A12	35×120
		180000	1.00	12.0	C10R	51×95
		220000	1.50	11.2	C12	51×120
		270000	1.50	12.8	C12	51×120
		330000	1.50	15.3	D10R	63.5×95
		390000	1.50	17.3	D12R	63.5×115
		470000	2.00	16.7	D13R	63.5×130
		560000	2.00	19.0	E12R	76×115
		680000	2.00	21.7	E13R	76×130
		820000	2.00	24.7	E16R	76×155
16	20	22000	0.60	4.1	A5	35×50
		27000	0.60	4.5	A5	35×50
		33000	0.60	5.0	A5	35×50
		39000	0.60	5.9	A6	35×65
		47000	0.60	6.4	A8	35×80
		56000	0.60	7.3	A8	35×80
		68000	0.60	8.4	A10	35×100
		82000	0.80	8.3	A10	35×100
		100000	0.80	9.5	A12	35×120
		120000	0.80	10.9	A12	35×120
		150000	1.00	11.3	C10R	51×95
		180000	1.00	12.8	C12R	51×115
		220000	1.00	15.3	C13R	51×130
		270000	1.00	17.6	D10R	63.5×95
		330000	1.50	16.8	D12R	63.5×115
		390000	1.50	18.3	D13R	63.5×130
		470000	1.50	21.3	E12R	76×120
		560000	1.50	23.6	E13R	76×130
		680000	1.50	27.6	E16R	76×155
		820000	2.00	27.1	F16R	89×155
25	32	15000	0.50	3.7	A5	35×50
		18000	0.50	4.1	A5	35×50
		22000	0.50	4.5	A5	35×50
		27000	0.50	5.0	A6	35×65
		33000	0.50	5.9	A8	35×80
		39000	0.50	6.7	A8	35×80
		47000	0.50	7.7	A10	35×100
		56000	0.60	7.9	A10	35×100
		68000	0.60	9.1	A12	35×120
		82000	0.60	10.4	A12	35×120
		100000	0.80	10.3	C10R	51×95
		120000	0.80	11.7	C10R	51×115

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标准评级 Standard Ratings

额定纹波电流 Rated Ripple Current (Arms,+105°C,120Hz)

Rated Voltage (V.D.C)	Surge Voltage (V.D.C)	Rated Capacitance (μF)	Dissipation Factor MAX	Ripple Current	Outline Size	
					Code	ΦDxL(mm)
25	32	150000	0.80	14.1	C13R	51×130
		180000	0.80	15.7	D10R	63.5×95
		220000	1.00	16.1	D12R	63.5×115
		270000	1.00	18.6	D13R	63.5×130
		330000	1.00	21.9	D16R	63.5×155
		390000	1.20	22.0	E12R	76×120
		470000	1.20	25.6	E13R	76×155
		560000	1.20	27.9	E16R	89×130
		680000	1.20	32.5	F16R	89×155
35	44	10000	0.40	3.4	A5	35×50
		12000	0.40	3.7	A5	35×50
		15000	0.40	4.2	A6	35×65
		18000	0.40	4.9	A8	35×80
		22000	0.40	5.7	A8	35×80
		27000	0.40	6.3	A10	35×100
		33000	0.40	7.2	A10	35×100
		39000	0.50	7.3	A12	35×120
		47000	0.50	8.7	C10R	35×120
		56000	0.60	8.6	C10R	51×95
		68000	0.60	9.8	C12R	51×95
		82000	0.60	11.6	D10R	51×115
		100000	0.60	13.3	D12R	63.5×95
		120000	0.60	14.8	D12	63.5×115
		150000	0.80	14.9	D13R	63.5×120
		180000	0.80	17.0	E12R	63.5×130
		220000	0.80	20.0	E13R	76×115
		270000	1.00	20.3	E16R	76×130
		330000	1.00	23.5	F13R	76×155
		390000	1.00	26.4	F16R	89×130
		470000	1.00	29.6	F16R	89×155
50	63	5600	0.30	3.0	A5	35×50
		6800	0.30	3.3	A5	35×50
		8200	0.30	3.6	A5	35×50
		10000	0.30	4.0	A6	35×65
		12000	0.30	4.7	A8	35×80
		15000	0.30	5.5	A8	35×80
		18000	0.30	6.2	A10	35×100
		22000	0.40	6.3	A12	35×120
		27000	0.40	7.1	A12	35×120
		33000	0.40	8.2	C10R	51×95
		39000	0.50	8.1	C10R	51×95
		47000	0.50	9.3	C12R	51×115
		56000	0.50	10.5	D10R	63.5×95
		68000	0.50	12.0	D10R	63.5×95
		82000	0.50	13.7	D12R	63.5×115
		100000	0.60	14.7	E12R	76×115
		120000	0.60	16.7	E12	76×120
		150000	0.60	19.3	E13R	76×130
		180000	0.60	21.9	E16R	76×155
		220000	0.60	21.4	F13R	89×130

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标准评级 Standard Ratings

额定纹波电流 Rated Ripple Current (Arms,+105°C,120Hz)

Rated Voltage (V.D.C)	Surge Voltage (V.D.C)	Rated Capacitance (μF)	Dissipation Factor MAX	Ripple Current	Outline Size	
					Code	ΦDxL(mm)
50	63	270000	0.60	24.6	F16R	89×155
		3900	0.25	2.7	A5	35×50
		4700	0.25	3.0	A5	35×50
		5600	0.25	3.3	A5	35×50
		6800	0.25	3.6	A6	35×65
		8200	0.25	4.3	A8	35×80
		10000	0.25	4.9	A8	35×80
		12000	0.25	5.6	A10	35×100
		15000	0.30	5.9	A10	35×100
63	79	18000	0.30	6.7	A12	35×120
		22000	0.30	7.8	A12	35×120
		27000	0.40	7.4	C10R	51×95
		33000	0.40	8.4	C10R	51×95
		39000	0.40	9.5	C12R	51×115
		47000	0.40	11.3	C13R	51×130
		56000	0.40	12.8	D12R	63.5×115
		68000	0.50	12.7	D12	63.5×120
		82000	0.50	14.5	D13R	63.5×130
		100000	0.50	16.7	E12R	76×115
		120000	0.50	18.9	E13R	76×130
		150000	0.50	22.4	E16R	76×155
		180000	0.60	22.4	F13R	89×130
		220000	0.60	26.2	F16R	89×155
		3300	0.25	2.5	A5	35×50
		3900	0.25	2.8	A5	35×50
		4700	0.25	3.0	A6	35×65
		5600	0.25	3.6	A8	35×80
		6800	0.25	3.9	A8	35×80
		8200	0.25	4.5	A8	35×80
80	100	10000	0.25	5.2	A10	35×100
		12000	0.25	5.9	A10	35×100
		15000	0.25	6.8	A12	35×120
		18000	0.25	7.8	A12	35×120
		22000	0.30	8.0	C10R	51×95
		27000	0.30	9.2	C10R	51×95
		33000	0.30	10.5	C12R	51×115
		39000	0.30	12.0	C13R	51×130
		47000	0.30	13.6	D12R	63.5×115
		56000	0.40	13.4	D13R	63.5×130
		68000	0.40	15.4	E12R	76×115
		82000	0.40	17.5	E13R	76×130
		100000	0.40	20.5	E16R	76×155
		120000	0.40	22.7	F13R	89×130
		150000	0.40	26.5	F16R	89×155
		1800	0.25	1.9	A5	35×50
		2200	0.25	2.1	A5	35×50
		2700	0.25	2.3	A5	35×50
		3300	0.25	2.6	A6	35×65
		3900	0.25	3.0	A8	35×80
		4700	0.25	3.5	A8	35×80

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标准评级 Standard Ratings

额定纹波电流 Rated Ripple Current (Arms,+105°C,120Hz)

Rated Voltage (V.D.C)	Surge Voltage (V.D.C)	Rated Capacitance (μF)	Dissipation Factor MAX	Ripple Current 85°C 120Hz	Outline Size	
					Code	ΦDxL(mm)
100	125	5600	0.25	3.9	A10	35×100
		6800	0.25	4.5	A10	35×100
		8200	0.25	5.1	A12	35×120
		10000	0.25	5.9	A12	35×120
		12000	0.25	6.4	C8R	51×75
		15000	0.25	7.0	C10R	51×95
		18000	0.25	8.3	C12R	51×115
		22000	0.25	10.0	C13R	51×130
		27000	0.25	11.5	D12R	63.5×115
		33000	0.25	11.9	D13R	63.5×130
		39000	0.25	13.4	E12R	76×115
		47000	0.35	14.2	E13R	76×130
		56000	0.35	16.0	F16R	76×155
		68000	0.35	18.8	F13R	89×130
		82000	0.35	20.5	F16R	89×155
		100000	0.35	24.0	F17R	89×171
160	200	3300	0.25	5.18	A12	35×120
		3900	0.25	5.33	C8R	51×75
		4700	0.25	5.85	C8R	51×75
		5600	0.25	7.03	C10R	51×95
		6800	0.25	7.77	C10R	51×95
		8200	0.25	9.14	C12R	51×115
		10000	0.25	10.36	D10R	63.5×95
		12000	0.25	11.32	D10R	63.5×95
		15000	0.25	14.28	D13R	63.5×130
		18000	0.25	15.61	D13R	63.5×130
		22000	0.25	18.28	E13R	76×130
		27000	0.25	20.24	E13R	76×130
		33000	0.25	23.75	F13R	89×130
		39000	0.25	27.86	F16R	89×155
200	250	2200	0.25	3.92	A10	35×100
		2700	0.25	4.70	A12	35×120
		3300	0.25	4.92	C8R	51×75
		3900	0.25	5.33	C8R	51×75
		4700	0.25	6.44	C10R	51×95
		5600	0.25	7.55	C12R	51×115
		6800	0.25	8.77	C13R	51×130
		8200	0.25	9.40	D10R	63.5×95
		10000	0.25	10.36	D12R	63.5×95
		12000	0.25	12.06	E13R	76×95
		15000	0.25	14.43	E10R	76×95
		18000	0.25	16.50	E10R	76×130
		22000	0.25	19.61	E10R	76×155
		27000	0.25	21.51	F10R	89×130
		33000	0.25	25.53	F13R	89×155
250	300	1500	0.25	3.22	A10	35×100
		1800	0.25	3.52	A10	35×100
		2200	0.25	4.00	C8R	51×75
		2700	0.25	4.44	C8R	51×75
		3300	0.25	5.40	C10R	51×95

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标准评级 Standard Ratings

额定纹波电流 Rated Ripple Current (Arms,+105°C,120Hz)

Rated Voltage (V.D.C)	Surge Voltage (V.D.C)	Rated Capacitance (μF)	Dissipation Factor MAX	Ripple Current 85°C 120Hz	Outline Size	
					Code	ΦDxL(mm)
250	300	3900	0.25	6.29	C12R	51×115
		4700	0.25	7.10	D10R	63.5×95
		5600	0.25	7.77	D10R	63.5×95
		6800	0.25	9.14	D12R	63.5×115
		8200	0.25	10.03	D12R	63.5×115
		10000	0.25	11.66	D13R	63.5×130
		12000	0.25	12.88	E12R	76×115
		15000	0.25	15.10	E13R	76×130
		18000	0.25	17.69	E16R	76×155
		22000	0.25	20.91	F16R	89×155
350	400	390	0.20	1.67	A5	35×50
		470	0.20	2.15	A8	35×80
		560	0.20	2.37	A8	35×80
		680	0.20	2.59	A8	35×80
		820	0.20	3.07	A10	35×100
		1000	0.20	3.41	A10	35×100
		1200	0.20	3.81	C8R	51×75
		1500	0.20	4.26	C8R	51×75
		1800	0.20	5.14	C10R	51×95
		2200	0.20	5.70	C10R	51×95
		2700	0.20	7.14	C13R	51×130
		3300	0.20	7.92	C13R	51×130
		3900	0.20	9.00	D12R	63.5×115
		4700	0.20	10.33	D13R	63.5×130
		5600	0.20	11.36	E12R	76×115
		6800	0.20	13.10	E13R	76×130
		8200	0.20	15.43	F16R	76×155
400	450	10000	0.20	18.13	F16R	89×155
		12000	0.20	20.02	F16R	89×155
		15000	0.20	24.50	F20R	89×195
		18000	0.20	28.83	F24R	89×235
		330	0.20	1.52	A5	35×50
		390	0.20	1.96	A8	35×80
		470	0.20	2.15	A8	35×80
		560	0.20	2.37	A8	35×80
		680	0.20	1.82	A10	35×100
		820	0.20	3.07	A10	35×100
		1000	0.20	3.48	C8R	51×75
		1200	0.20	3.82	C8R	51×75
		1500	0.20	4.70	C10R	51×95
		1800	0.20	5.15	C10R	51×95
		2200	0.20	6.44	C13R	51×130
		2700	0.20	6.96	D10R	51×130
		3300	0.20	8.22	D12R	63.5×95
		3900	0.20	9.40	D13R	63.5×115
				10.44	D13R	63.5×130
		4700	0.20	7.04	E11R	76×105
				10.44	E12R	76×115
		5600	0.20	11.92	E13R	76×115
		6800	0.20	14.06	E16R	76×155
		8200	0.20	16.43	F16R	89×155
		10000	0.20	18.28	F16R	89×155

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标准评级 Standard Ratings

额定纹波电流 Rated Ripple Current (Arms,+105°C,120Hz)

Rated Voltage (V.D.C)	Surge Voltage (V.D.C)	Rated Capacitance (μF)	Dissipation Factor MAX	Rated ripple current (Arms,+85C,120Hz)	Outline Size	
					Code	ΦDxL(mm)
400	450	12000	0.20	21.84	F20R	89×195
		15000	0.20	26.31	F24R	89×235
450	500	270	0.20	1.37	A5	35×50
		330	0.20	1.82	A8	35×80
		390	0.20	1.96	A8	35×80
		470	0.20	2.15	A8	35×80
		560	0.20	2.55	A10	35×100
		680	0.20	2.81	A10	35×100
		820	0.20	3.18	C8R	51×75
		1000	0.20	3.48	C8R	51×75
		1200	0.20	4.22	C10R	51×95
		1500	0.20	5.07	C12R	51×115
		1800	0.20	5.85	C13R	51×130
		2200	0.20	6.29	D10R	63.5×95
		2700	0.20	7.48	D12R	63.5×115
		3300	0.20	8.66	D13R	63.5×130
		3900	0.20	9.47	E12R	76×115
		4700	0.20	10.88	E13R	76×130
		5600	0.20	12.80	E16R	76×155
		6800	0.20	15.00	F16R	89×155
		8200	0.20	16.50	F16R	89×155
		10000	0.20	20.00	F20R	89×195
		12000	0.20	23.61	F24R	89×235

* 支持客户根据需求定制 Support Customer Customization According To Demand