

# HDP 系列 Series

## 特点 Features

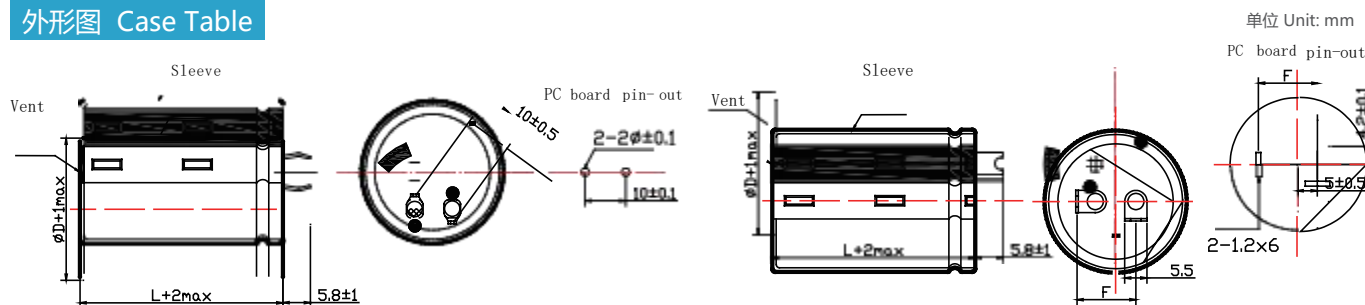
- 耐高纹波,小尺寸,105°C 2000小时。  
High ripple current ,Smaller size ,Load life of 2000 hours at 105°C
- 适用于开关电源,变频器。  
Best for switching power supplies, Inverter.
- RoHS指令已对应完毕。  
Adapted to the RoHS directive.



## 主要技术性能 Specifications

项目 Items	特性 Characteristics																				
使用温度范围 Operating Temperature Range	-55~+105°C																				
额定电压范围 Rated Voltage Range	16~550 V																				
标称容量允许偏差 Capacitance Tolerance	±20%																				
漏电流 Leakage Current	$I \leq \sqrt{3}$ (μA), 5 min 读数; C: 标称容量 (μF), V: 额定电压 (V)。																				
损耗角正切值(tgδ) Dissipation Factor (+20°C, 120Hz)	<table border="1"> <thead> <tr> <th>U<sub>r</sub> (V)</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>80</th> <th>100</th> <th>160~350</th> <th>400~550</th> </tr> </thead> <tbody> <tr> <td>tgδ</td> <td>0.50</td> <td>0.45</td> <td>0.4</td> <td>0.35</td> <td>0.3</td> <td>0.25</td> <td>0.20</td> <td>0.15</td> <td>0.20</td> </tr> </tbody> </table>	U <sub>r</sub> (V)	16	25	35	50	63	80	100	160~350	400~550	tgδ	0.50	0.45	0.4	0.35	0.3	0.25	0.20	0.15	0.20
U <sub>r</sub> (V)	16	25	35	50	63	80	100	160~350	400~550												
tgδ	0.50	0.45	0.4	0.35	0.3	0.25	0.20	0.15	0.20												
温度特性 Temperature Characteristics (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>U<sub>r</sub> (V)</th> <th>16~100</th> <th>160~400</th> <th>450~550</th> </tr> </thead> <tbody> <tr> <td>Z-25°C / Z+20°C</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>Z-55°C / Z+20°C</td> <td>5</td> <td>6</td> <td>7</td> </tr> </tbody> </table>	U <sub>r</sub> (V)	16~100	160~400	450~550	Z-25°C / Z+20°C	2	3	4	Z-55°C / Z+20°C	5	6	7								
U <sub>r</sub> (V)	16~100	160~400	450~550																		
Z-25°C / Z+20°C	2	3	4																		
Z-55°C / Z+20°C	5	6	7																		
耐久性 Load Life	<p>+105°C施加带额定纹波电流的额定电压2000小时, 恢复16小时后: After applying rated voltage with specified ripple current for 2000 hours at +105°C and then resumed for 16 hours:                      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 ≤Initial specified value                      损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2times of the initial specified value</p>																				
高温贮存 Shelf Life	<p>+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<sub>r</sub> to be applied for 30 minutes and then resumed for 16 hours:                      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 ≤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</p>																				

## 外形图 Case Table



## 频率修正系数 Frequency Coefficient

Freq.(Hz) U(V)	60	120	1K	10K	≥50K
≤100	0.90	1.00	1.15	1.15	1.15
160~250	0.85	1.00	1.32	1.45	1.50
≥315	0.82	1.00	1.30	1.41	1.43

## 尺寸 Dimensions

额定电压 UR (V)	浪涌电压 US (V)	标称 电容量 CR (μF)	额定纹波电流 Rated Ripple Current 105°C, 120Hz (Arms)	尺寸 Size ΦD x L (mm)
16 (1C)	19	5600	1.6	22x25
		6800	1.9	25x30
		10000	2.4	22x35
		10000	2.4	25x30
		12000	2.7	22X40
		12000	2.8	25X35
		15000	3.3	25X40
		15000	3.3	30X30
		18000	3.8	25X45
		18000	4.0	25X50
		18000	3.8	30X35
		18000	4.0	35X30
		22000	4.4	30X40
		22000	4.6	35X35
		27000	5.1	30X45
		27000	5.3	30X50
		27000	5.3	35X40
		33000	6.2	35X45
		39000	7.2	30X70
		39000	7.0	35X50
		47000	8.1	40X50
		56000	10.0	35X80
		56000	8.8	40X50
		68000	10.4	40X60
82000	13.3	35X100		
82000	12.7	40X80		
82000	11.4	45X60		
100000	14.0	45X80		
120000	16.9	40X100		
150000	18.8	45X100		

Size φD×L(mm)

Maximum Allowable Ripple Current (A rms) at 105°C 120Hz

尺寸 Dimensions

额定电压 UR (V)	浪涌电压 US (V)	标称 电容量 CR (μF)	额定纹波电流 Rated Ripple Current 105°C, 120Hz (Arms)	尺寸 Size ΦD x L (mm)
25 (1E)	29	3900	1.4	22X25
		5600	1.7	22X30
		6800	2.0	22X35
		6800	2.1	25X30
		8200	2.3	22X40
		8200	2.4	25X35
		10000	2.8	25X40
		10000	2.8	30X30
		12000	3.2	25X45
		12000	3.2	30X35
		15000	3.7	25X50
		15000	3.7	30X40
		15000	3.7	35X30
		18000	4.2	30X45
		18000	4.4	30X50
		18000	4.2	35X35
		22000	4.9	35X40
		22000	5.1	35X45
		27000	6.1	30X70
		27000	5.9	35X50
		33000	7.0	35X60
		39000	7.5	40X50
		47000	9.3	35X80
		47000	8.8	40X60
56000	11.2	35X100		
56000	9.6	45X60		
68000	11.8	40X80		
68000	12.9	40X100		
82000	12.9	45X80		
100000	15.6	45X100		
35 (1V)	41	1500	0.9	22X25
		2200	1.2	22X30
		2700	1.4	22X35
		2700	1.4	25X30
		3300	1.6	22X40
		3300	1.7	25X35
		3900	1.9	25X40
		3900	1.9	30X30
		4700	2.2	25X45
		4700	2.2	30X35
		5600	2.5	25X50
		5600	2.5	30X40
		5600	2.5	35X30
		6800	2.8	30X45
		6800	2.9	35X35
		8200	3.2	30X50
		8200	3.3	35X40
		8200	3.4	35X45
		10000	3.9	35X50
		12000	4.5	30X70
		12000	4.6	35X60
		15000	5.1	40X50
		18000	6.4	35X80

额定电压 UR (V)	浪涌电压 US (V)	标称 电容量 CR (μF)	额定纹波电流 Rated Ripple Current 105°C, 120Hz (Arms)	尺寸 Size ΦD x L (mm)
35 (1V)	41	18000	6.0	40X60
		22000	7.7	35X100
		22000	7.4	40X80
		22000	6.6	45X60
		27000	8.9	40X100
		27000	8.2	45X80
		39000	10.7	45X100
50 (1H)	58	1200	0.8	22X25
		1500	1.0	22X30
		1800	1.2	22X35
		1800	1.2	25X30
		2200	1.4	22X40
		2200	1.5	25X35
		2700	1.6	25X40
		2700	1.6	30X30
		3300	1.9	25X45
		3300	1.9	30X35
		3900	2.2	25X50
		3900	2.2	30X40
		3900	2.2	35X30
		4700	2.5	30X45
		4700	2.5	35X35
		5600	2.8	30X50
		6800	3.3	35X45
		8200	3.9	30X70
		10000	4.5	35X60
		10000	4.4	40X50
		12000	5.5	35X80
		12000	5.1	40X60
		15000	5.7	45X60
		18000	7.4	35X100
		18000	7.0	40X80
		22000	8.5	40X100
		22000	7.7	45X80
27000	9.4	45X100		
63 (1J)	73	1200	0.9	22X25
		1500	1.1	22X30
		1800	1.3	22X35
		1800	1.3	25X30
		2200	1.5	22X40
		2200	1.6	25X35
		2700	1.8	25X40
		2700	1.8	30X30
		3300	2.1	25X45
		3300	2.1	30X35
		3900	2.4	25X50
		3900	2.4	30X40
		3900	2.4	35X30
		4700	2.7	30X45
		4700	2.8	35X35
		5600	3.1	30X50
		6800	3.6	35X45
		8200	4.3	30X70
		10000	4.9	35X60
		10000	4.8	40X50
		12000	6.0	35X80
12000	5.6	40X60		

额定电压 UR (V)	浪涌电压 US (V)	标称容量 CR (μF)	额定纹波电流 Rated Ripple Current 105°C, 120Hz (Arms)	尺寸 Size ΦD x L (mm)
63 (1J)	73	15000	6.3	45X60
		18000	8.1	35X100
		18000	7.7	40X80
		22000	9.3	40X100
		22000	8.5	45X80
		27000	10.3	45X100
80 (1K)	92	680	0.7	22X25
		820	0.8	22X30
		1200	1.0	22X35
		1200	1.0	25X30
		1500	1.2	22X40
		1500	1.2	25X35
		1800	1.4	25X40
		1800	1.4	30X30
		2200	1.6	25X45
		2200	1.7	25X50
		2200	1.6	30X35
		2200	1.7	35X30
		2700	1.9	30X40
		2700	2.0	30X45
		2700	2.0	35X35
		3300	2.3	30X50
		3300	2.3	35X40
		3900	2.6	35X45
		4700	3.0	35X50
		5600	3.4	30X70
		5600	3.5	35X60
		5600	3.4	40X50
		6800	4.3	35X80
		6800	4.0	40X60
		10000	5.7	35X100
		10000	4.9	45X60
12000	6.0	40X80		
15000	7.3	40X100		
18000	8.0	45X100		
100 (2A)	115	560	0.9	22X25
		1000	1.3	22X35
		1000	1.3	25X30
		1200	1.5	22X40
		1200	1.5	25X35
		1500	1.8	25X40
		1500	1.8	30X30
		1800	2.1	25X45
		1800	2.2	25X50
		1800	2.2	35X30
		2200	2.4	30X40
		2200	2.5	30X45
		2200	2.5	35X35
		2700	2.9	30X50
		2700	2.9	35X40
		3300	3.4	35X45
		3900	4.0	30X70
		3900	3.8	35X50
		4700	4.5	35X60
		4700	4.4	40X50
		5600	5.5	35X80
		5600	5.1	40X60
		8200	7.3	35X100
		8200	7.0	40X80
		8200	6.2	45X60
		10000	7.7	45X80

额定电压 UR (V)	浪涌电压 US (V)	标称 电容量 CR (μF)	额定纹波电流 Rated Ripple Current 105°C, 120Hz (Arms)	尺寸 Size ΦD x L (mm)
100 (2A)	115	12000	9.2	40X100
		15000	10.3	45X100
160 (2C)	200	270	0.7	22X25
		390	0.9	22X30
		470	1.1	22X35
		470	1.1	25X30
		560	1.2	22X40
		560	1.3	25X35
		680	1.5	25X40
		680	1.4	30X30
		820	1.6	25X45
		820	1.7	30X35
		1000	1.9	25X50
		1000	1.9	30X40
		1000	1.9	35X30
		1200	2.2	30X45
		1200	2.2	35X35
		1500	2.6	30X50
		1500	2.6	35X40
		1800	3.0	35X45
		1800	3.1	35X50
		2200	3.6	30X70
		2200	3.7	35X60
		2700	4.0	40X50
		3300	5.0	35X80
		3300	4.7	40X60
		3900	6.2	35X100
		3900	5.2	45X60
		4700	6.3	40X80
5600	7.5	40X100		
5600	6.9	45X80		
6800	8.3	45X100		
250 (2E)	300	180	0.6	22X25
		220	0.7	22X30
		270	0.9	22X35
		330	1.0	25X30
		390	1.1	22X40
		390	1.1	25X35
		470	1.3	25X40
		470	1.3	30X30
		560	1.5	25X45
		560	1.5	30X35
		560	1.6	35X30
		680	1.7	25X50
		680	1.7	30X40
		820	2.0	30X45
		820	2.1	30X50
		820	2.0	35X35
		1000	2.3	35X40
		1200	2.6	35X45
		1200	2.7	35X50
		1500	3.2	30X70
		1500	3.3	35X60
		1800	4.0	35X80
		1800	3.5	40X50
		1800	3.8	40X60
		2700	5.4	35X100
		2700	5.2	40X80
		2700	4.6	45X60
3300	6.3	40X100		

额定电压 UR (V)	浪涌电压 US (V)	标称容量 CR (μF)	额定纹波电流 Rated Ripple Current 105°C, 120Hz (Arms)	尺寸 Size Φ D x L (mm)
250 (2E)	300	3300	5.7	45X80
		4700	7.4	45X100
315 (2F)	365	100	0.4	22X25
		120	0.5	22X25
		180	0.7	22X30
		180	0.7	22X35
		220	0.8	25X30
		270	0.9	25X35
		270	0.9	25X40
		330	1.0	30X30
		330	1.0	25X45
		390	1.1	35X30
		390	1.1	25X50
		470	1.3	30X40
		470	1.3	30X45
		560	1.4	35X35
		560	1.2	30X50
		680	1.8	35X40
		680	1.8	35X45
		820	2.0	35X50
		820	2.0	30X70
		1200	2.6	40X50
		1200	2.6	35X80
		1500	2.9	40X60
		1500	2.9	35X100
1800	3.6	45X60		
1800	3.6	40X80		
2700	4.8	45X80		
3300	5.2	45x100		
350 (2V)	400	100	0.5	22X25
		120	0.6	22X30
		180	0.7	22X35
		180	0.8	22X40
		180	0.7	25X30
		220	0.9	25X35
		270	1.0	25X40
		270	1.0	30X30
		330	1.2	25X45
		330	1.1	30X35
		330	1.2	35X30
		390	1.3	25X50
		390	1.3	30X40
		470	1.5	30X45
		470	1.5	35X35
		560	1.7	30X50
		560	1.7	35X40
		560	1.8	35X45
		680	2.1	35X50
		820	2.3	30X70
		820	2.4	35X60
		820	2.4	40X50
		1200	3.3	35X80
1200	3.1	40X60		
1500	4.0	35X100		
1500	3.4	45X60		
1800	4.2	40X80		
1800	4.6	40X100		
1800	4.2	45X80		
2700	5.6	45X100		

额定电压 UR (V)	浪涌电压 US (V)	标称 电容量 CR (μF)	额定纹波电流 Rated Ripple Current 105°C, 120Hz (Arms)	尺寸 Size ΦD x L (mm)
400 (2G)	450	82	0.4	22X25
		120	0.5	22X30
		150	0.6	22X35
		150	0.6	25X30
		180	0.7	22X40
		180	0.7	25X35
		220	0.8	25X40
		220	0.8	30X30
		270	0.9	25X45
		270	0.9	25X50
		270	0.9	30X35
		270	0.9	35X30
		330	1.0	30X40
		330	1.1	35X35
		390	1.2	30X45
		390	1.2	30X50
		390	1.2	35X40
		470	1.4	35X45
		560	1.7	30X70
		560	1.6	35X50
		680	1.9	35X60
		680	1.9	40X50
		820	2.3	35X80
		820	2.2	40X60
		1200	3.1	35X100
		1200	3.0	40X80
		1200	2.7	45X60
		1500	3.6	40X100
1500	3.3	45X80		
2200	4.4	45X100		
450 (2W)	500	68	0.4	22X25
		82	0.4	22X30
		100	0.5	22X35
		120	0.6	22X40
		120	0.6	25X30
		150	0.7	25X35
		150	0.7	25X40
		180	0.8	25X45
		180	0.7	30X30
		180	0.8	30X35
		220	0.9	25X50
		220	0.9	30X40
		220	0.9	35X30
		270	1.0	30X45
		270	1.1	35X35
		330	1.2	30X50
		330	1.2	35X40
		390	1.4	35X45
		470	1.6	30X70
		470	1.6	35X50
		560	1.9	35X60
		560	1.8	40X50
		680	2.3	35X80
		680	2.1	40X60
		820	2.8	35X100
		820	2.4	45X60
		1000	2.9	40X80
		1200	3.5	40X100
		1200	3.2	45X80
		1500	3.9	45X100



额定电压 UR (V)	浪涌电压 US (V)	标称 电容量 CR ( μF)	额定纹波电流 Rated Ripple Current 105°C, 120Hz (Arms)	尺寸 Size ΦD x L (mm)
500 (2H)	550	56	0.4	22x25
		68	0.4	22x30
		82	0.5	22x35
		100	0.6	22x40
		120	0.6	25x30
		120	0.6	22x35
		150	0.7	25x45
		150	0.9	30x30
		180	0.8	30x35
		180	0.9	35x30
		220	1.0	25x50
		220	1.0	30x45
		270	1.2	30x50
		270	1.2	35x40
		390	1.5	35x50
		470	1.8	35x60
		560	2.0	35x80
		560	2.0	40x60
		680	2.3	35x100
		680	2.3	40x80
820	2.6	40x100		
820	2.6	45x80		
550 (2Y)	600	47	0.4	22X25
		56	0.5	22X30
		68	0.5	22X35
		100	0.6	22X40
		120	0.7	25X35
		120	0.7	30X30
		150	0.9	30X35
		180	1.0	35X35
		220	1.2	35X40
		270	1.5	35X50
		390	1.8	35X60
		390	1.8	40X50
		470	2.0	35X80
		470	2.0	40X60
		560	2.3	35X100
		560	2.3	40X80
		680	2.5	40X100
		680	2.5	45X80

Size φD×L(mm)

Maximum Allowable Ripple Current (A rms) at 105°C 120Hz