

CD 299 Series



THREECON
新三能电子 SUNION ELECTRONIC

PG 系列

Ratings for PG Series

105°C 7000小时

- 105°C 长寿命
- 高纹波
- 适用于精密工业电源

7000h at 105°C

- Extended Lifetime at 105°C
- High Ripple Current
- High Professional Industrial Power Supplies



项目 Item	特性 Characteristics		
使用温度范围(°C) Operating Temperature Range	-40~+105	-25~+105	
额定电压范围(V) Voltage Range	160~250	315~500	
标称电容量范围(μF) Capacitance Range	39~2200		
标称电容量允许偏差 Capacitance Tolerance(20°C,120Hz)	± 20%		
漏电流(μA) Leakage Current	I ≤ 0.01CV 或 1.5mA, 取较小者 (20°C,5分钟) C: 标称电容量 (μF) V: 额定电压 (V) I ≤ 0.01CV or 1.5mA whichever is smaller (at 20°C,after 5 minutes) C: Nominal Capacitance (μF) V: Rated Voltage (V)		
损耗角正切值 (tg δ) Dissipation Factor(20°C,120Hz)	额定电压 Rated Voltage (V)	160 180 200 250 315 350 400 450~500	
	损耗角正切值 Tan δ (max)	0.15	
低温特性 Stability at Low Temperature (Impedance Ratio at 120Hz)	额定电压 Rated Voltage(V)	≤250	315~500
	Z _{-25°C} / Z _{+20°C}	3	8
	Z _{-40°C} / Z _{+20°C}	12	—

项目 Item	使用寿命 Useful Life		负载寿命 Load Life	耐久试验 Endurance Test	高温贮存 shelf Life
寿命 Lifetime	9000h	>200000h	7000h	7000h	1000h
漏电流 Leakage Current	≤ 初始规定值 Not more than specified value		≤ 初始规定值 Not more than specified value	≤ 初始规定值 Not more than specified value	≤ 初始规定值 Not more than specified value
容量变化率 Capacitance Change	初始值 ± 30%以内 Within ± 30% of initial Value		初始值 ± 20%以内 Within ± 20% of initial Value	初始值 ± 20%以内 Within ± 20% of initial Value	初始值 ± 20%以内 Within ± 20% of initial Value
损耗变化率 Dissipation Factor	≤ 初始规定值的3倍 Not more than 300% of specified value		≤ 初始规定值的2倍 Not more than 200% of specified value	≤ 初始规定值的2倍 Not more than 200% of specified value	≤ 初始规定值的2倍 Not more than 200% of specified value
使用条件 Condition: 使用电压 APPLIED Voltage 使用电流 Applied Current 使用温度 APPLIED Temperature	U _R	U _R	U _R	U _R	U _R =0
	I _R	1.4×I _R	I _R	I _R =0	I _R =0
	105°C	40°C	105°C	105°C	105°C

试验后:
施加额定电压30分
钟后恢复24小时
After test:
U_R to be applied
for 30min
>24h before
measurement

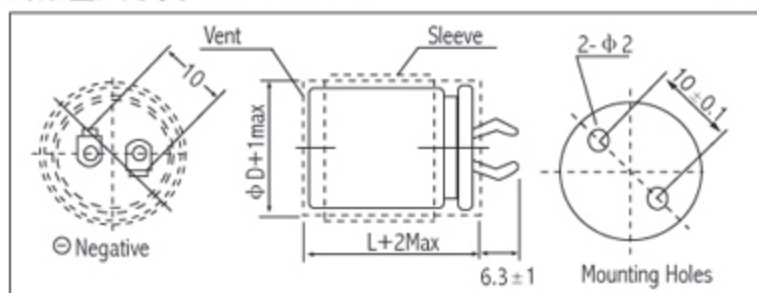
SNAP-IN/LUG

CD 299 系列
Ratings for CD 299 Series

U _R (Surge Voltage) Code (V)	Rated Capacitance (μF)	Max ESR 20°C 120HZ (mΩ)	Typ ESR 20°C 120HZ (mΩ)	Rated Ripple Current 105°C120HZ (Arms)	Size Φ DXL (mm)
160 (200) 2C	270	737	516	1.1	22×25
	330	603	422	1.2	22×30
	390	510	357	1.3	25×25
	470	424	296	1.4	22×35
		424	296	1.4	25×30
	560	355	249	1.5	22×40
		355	249	1.5	30×25
	680	293	205	1.7	22×45
		293	205	1.7	25×35
		293	205	1.7	30×30
	820	243	170	2	25×40
		199	139	2.2	25×45
	1000	199	139	2.2	30×35
		166	116	2.3	25×50
	1200	166	116	2.3	30×40
		166	116	2.3	35×35
133		93	2.5	30×45	
1500	133	93	2.5	35×40	
	111	77	2.7	30×50	
1800	111	77	2.7	35×45	
	2200	91	63	2.9	35×50
180 (225) 2K	220	905	433	1	22×25
	330	603	433	1.2	22×30
		603	433	1.2	25×25
	470	424	296	1.4	22×35
		424	296	1.4	25×30
		424	296	1.4	30×25
	560	355	249	1.5	22×40
		355	249	1.5	25×35
	680	293	205	1.7	22×50
		293	205	1.7	25×40
		293	205	1.7	30×30
	820	243	170	2	25×45
		243	170	2	30×35
		243	170	2	35×30
	1000	199	139	2.2	30×40
		166	116	2.3	30×45
1200	166	116	2.2	35×35	
	133	93	2.5	30×50	
1500	133	93	2.5	35×40	
	111	77	2.7	35×45	
2200	91	63	2.9	35×50	
200 (250) 2D	220	905	433	1	22×25
	270	737	516	1.1	22×30
		737	516	1.1	25×25
	390	510	357	1.3	22×35
		510	357	1.3	25×30
		510	357	1.3	30×25
	470	424	296	1.4	22×40
		424	296	1.4	25×35
	424	296	1.4	30×30	

U _R (Surge Voltage) Code (V)	Rated Capacitance (μF)	Max ESR 20°C 120HZ (mΩ)	Typ ESR 20°C 120HZ (mΩ)	Rated Ripple Current 105°C120HZ (Arms)	Size Φ DXL (mm)
200 (250) 2D	560	355	349	1.5	22×45
	680	293	205	1.7	25×40
		293	205	1.7	30×35
	820	243	170	2	25×50
		243	170	2	30×40
		243	170	2	35×30
	1000	199	139	2.2	30×45
		199	139	2.2	35×35
		166	116	2.3	30×50
	1200	166	116	2.3	35×40
		1500	133	93	2.5
	250 (300) 2E	180	1106	774	0.9
220		905	633	1	25×25
		737	516	1.1	22×35
270		737	516	1.1	25×30
		737	516	1.1	30×25
		603	422	1.2	22×40
330		603	422	1.2	25×35
		510	357	1.3	22×45
390		510	357	1.3	25×40
		510	357	1.3	30×30
		424	296	1.4	25×45
470		424	296	1.4	30×35
		424	296	1.4	35×30
		355	249	1.5	25×50
680		293	205	1.7	30×45
		293	205	1.7	35×35
	243	170	2	30×50	
820	243	170	2	35×40	
	199	139	2.2	35×45	
	1200	166	116	2.3	35×50
315 (365) 2F	82	2427	1335	0.64	22×25
	100	1990	1095	0.69	22×30
	120	1659	912	0.75	25×25
		1327	730	0.82	22×35
		1327	730	0.82	25×30
	150	1327	730	0.82	30×25
		1106	608	0.9	22×40
		1106	608	0.9	25×35
	180	905	498	1	22×45
		905	498	1	25×40
905		498	1	30×30	
270	737	406	1.1	25×45	
	737	406	1.1	30×35	
	737	406	1.1	35×30	
330	603	332	1.2	25×50	
	603	332	1.2	30×40	
390	510	281	1.3	30×45	
	510	281	1.3	35×35	
470	424	233	1.4	30×50	
	424	233	1.4	35×40	

外形图尺寸表 Dimensions



mm 频率系数 Frequency Coefficient

额定电压 Rated voltage(V)	50/60Hz	120Hz	300Hz	1KHz	≥10 KHz
160~250	0.80	1.00	1.17	1.45	1.50
315~450	0.80	1.00	1.16	1.41	1.43

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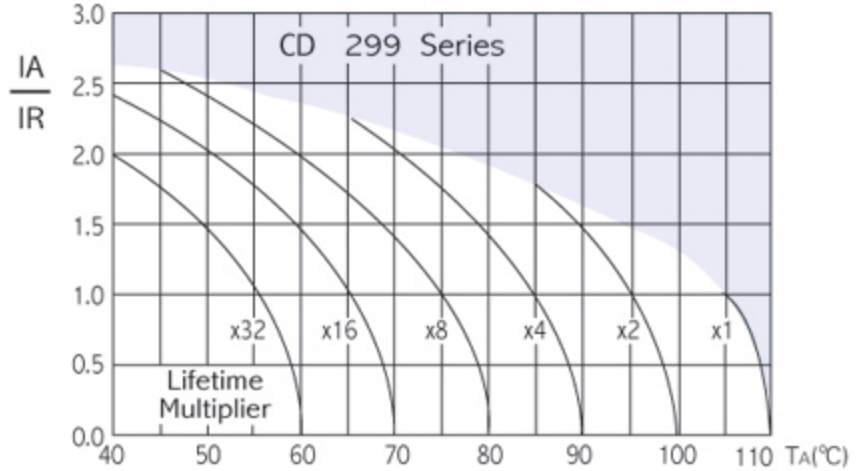
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U _R (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C 120HZ	Typ ESR 20°C 120HZ	Rated Ripple Current 105°C120HZ	Size Φ DXL
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)
315 (365) 2F	560	355	196	1.5	35×45
	680	293	161	1.7	35×50
350 (400) 2V	82	2427	1335	0.64	22×25
	100	1990	1095	0.69	22×30
		1990	1095	0.69	25×25
	120	1659	912	0.75	22×35
		1659	912	0.75	25×30
	150	1327	730	0.82	22×40
		1327	730	0.82	30×25
	180	1106	608	0.9	22×45
		1106	608	0.9	25×35
		1106	608	0.9	30×30
	220	905	498	1	22×50
		905	498	1	25×40
	270	737	406	1.1	25×50
		737	406	1.1	30×35
		737	406	1.1	35×30
	330	603	332	1.2	30×45
		603	332	1.2	35×35
	390	510	281	1.3	30×50
		510	281	1.3	35×40
	400 (450) 2G	56	3554	1955	0.51
68		2927	1610	0.56	22×30
		2927	1610	0.56	25×25
82		2427	1335	0.64	22×35
100		1990	1095	0.69	25×30
		1659	912	0.75	22×40
120		1659	912	0.75	25×35
		1659	912	0.75	30×25
		1327	730	0.82	22×50
150		1327	730	0.82	25×40
		1327	730	0.82	30×30
		1106	608	0.9	25×45
180		1106	608	0.9	30×35
		1106	608	0.9	35×25
		905	498	1	25×50
220		905	498	1	30×40
		905	498	1	35×30
		737	406	1.1	30×45
270		737	406	1.1	35×35
		603	332	1.2	30×50
330	603	332	1.2	35×40	
	390	510	1.3	35×45	
470	424	233	1.4	35×50	
450 (500) 2W	39	3805	3062	0.37	22×25
	47	5647	2541	0.4	22×30
	56	4739	2133	0.47	22×35
		4739	2133	0.47	25×25
	68	3903	1756	0.53	22×40
		3903	1756	0.53	25×30
	82	3237	1456	0.56	22×45
		3237	1456	0.56	25×35
		3237	1456	0.56	30×25
	100	2654	1194	0.64	22×50
		2654	1194	0.64	25×40
		2654	1194	0.64	30×30
	120	2212	995	0.72	25×45
		150	1769	796	0.79
	1769		796	0.79	30×40
	1769		796	0.79	35×30
	180	1474	664	0.87	30×45
		1474	664	0.87	35×35
	220	1206	543	1	30×50
		1206	543	1	35×40
270	983	442	1.19	35×45	
330	804	362	1.38	35×50	

U _R (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C 120HZ	Typ ESR 20°C 120HZ	Rated Ripple Current 105°C120HZ	Size Φ DXL
(V)	(μF)	(mΩ)	(mΩ)	(Arms)	(mm)
500 (550) 2H	47	5647	2823	0.41	22×30
	56	4739	2370	0.47	22×30
	68	3903	1951	0.54	22×35
		3903	1951	0.54	25×30
	82	3237	1618	0.62	22×40
		3237	1618	0.62	25×35
	100	2654	1327	0.67	22×45
		2654	1327	0.67	25×40
		2654	1327	0.67	30×30
	120	2212	1106	0.77	22×50
		2212	1106	0.74	25×40
		2212	1106	0.77	30×35
		2212	1106	0.80	35×30
	150	1769	885	0.82	25×45
		1769	885	0.85	30×40
		1769	885	0.85	35×35
	180	1474	737	0.98	25×50
		1474	737	1.01	30×45
	220	1206	603	1.12	30×50
		1206	603	1.12	35×40
270	983	492	1.25	30×50	
	983	492	1.25	35×45	
330	804	402	1.36	35×50	

寿命曲线 Lifetime Diagram



IA = actual ripple current at 120HZ, IR = rated ripple current at 120HZ, 105°C Multiplier of Useful Life as a function of ambient temperature and ripple current load

SNAP-IN/LUG