

CD 295 Series



85°C 5000小时

- 85°C 长寿命
- 高纹波
- 适用于长寿命工业电源类产品

5000h at 85°C

- Long Life at 85°C
- High Ripple Current
- Long Life General Industrial Electronics



项目 Item	特性 Characteristics	
使用温度范围(°C) Operating Temperature Range	-40~+85	-25~+85
额定电压范围(V) Voltage Range	10~400	450
标称电容量范围(µF) Capacitance Range	68~22000	
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) I ≤ 0.01CV or 1.5mA whichever is smaller (at 20°C, after 5 minutes) C: 标称电容量 (µF) V: 额定电压 (V) 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)	10 16 25 35 50 63~100 160~400 315~500
	损耗角正切值 Tan δ (max)	0.80 0.60 0.50 0.40 0.30 0.20 0.15 0.15
低温特性 Stability at Low Temperature (Impedance Ratio at 120Hz)	额定电压 Rated Voltage(V)	10 16~35 50~100 160~200 250~400 450
	Z-25°C / Z +20°C	5 4 3 4
	Z-40°C / Z +20°C	18 15 10 6 8 —

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	6000h	>100000h	5000h	5000h	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1.3倍 Not more than 130% 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	U _R	U _R	U _R	U _R	U _R =0
使用电流 Applied Current	I _R	1.4×I _R	I _R	I _R =0	I _R =0
使用温度 APPLIED Temperature	85°C	40°C	85°C	85°C	85°C
失效率 Failure Rate Level	≤ 1%	≤ 1%	guaranteed (保证)		

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

SNAP-IN/LUG



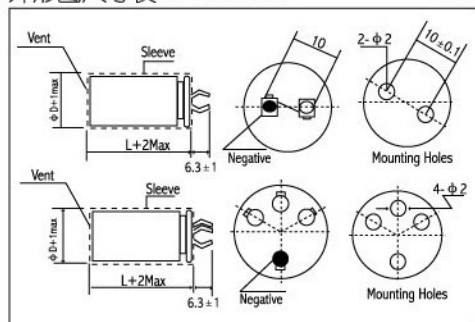
CD 295系列
Ratings for CD 295 Series

U _R (Surge Voltage) Code (V)	Rated Capacitance (μF)	Max ESR 20°C 120HZ (mΩ)	Typ ESR 20°C 120HZ (mΩ)	Rated Ripple Current 85°C 120HZ (Arms)	Size Φ DXL (mm)
10 (13) 1A	10000	106	74	2.5	22×25
	12000	89	62	2.7	22×25
	15000	71	50	3.2	22×30
		71	50	3.1	25×25
	18000	59	41	3.6	22×35
		59	41	3.6	25×30
	22000	48	34	4	22×40
		48	34	4.1	25×35
		48	34	4.1	30×25
		97	68	2.2	22×25
16 (20) 1C	8200	80	56	2.6	22×30
	10000	80	56	2.6	25×25
	12000	66	46	2.9	22×35
		53	37	3.3	22×40
	15000	53	37	3.3	25×30
		53	37	3.4	30×25
	18000	44	31	3.8	22×45
		44	31	3.7	25×35
	22000	36	25	4.2	22×50
		36	25	4.2	25×40
36		25	4.2	30×30	
36		25	4.2	35×25	
25 (32) 1E	5600	119	83	2	22×25
	6800	98	0.042	1400	22×30
		98	68	2.3	25×25
	8200	81	57	2.6	22×35
		66	46	2.9	22×40
	10000	66	46	2.8	25×30
		66	46	3	30×25
	12000	55	39	3.3	22×45
		55	39	3.2	25×35
	15000	55	39	3.4	30×30
		44	31	3.7	25×40
	18000	44	31	3.9	35×25
		37	26	4.3	25×50
	22000	37	26	4.2	30×35
30		21	4.8	30×40	
30		21	5	35×35	
30		21	5	35×35	
35 (44) 1V	3300	161	113	1.8	22×25
	3900	136	95	2.1	22×30
	4700	113	79	2.2	25×25
	5600	95	66	2.3	22×35
		95	66	2.3	25×30
	6800	78	55	2.9	22×40
		78	55	2.6	25×35
	8200	78	55	2.7	30×25
		65	45	2.8	22×50
		65	45	2.8	25×40
65		45	2.8	30×30	
	65	45	2.9	35×25	

U _R (Surge Voltage) Code (V)	Rated Capacitance (μF)	Max ESR 20°C 120HZ (mΩ)	Typ ESR 20°C 120HZ (mΩ)	Rated Ripple Current 85°C 120HZ (Arms)	Size Φ DXL (mm)
35 (44) 1V	10000	53	37	3.1	25×45
		53	37	3.2	30×35
	1200	44	31	3.5	25×50
		44	31	3.5	30×40
	15000	44	31	3.6	35×30
		35	25	4.1	30×45
	18000	35	25	4.1	35×35
		30	21	4.6	25×25
		30	21	4.7	30×50
		24	17	5.3	35×45
50 (63) 1H	2200	181	127	1.7	22×25
	2700	147	103	1.9	22×30
		147	103	1.9	25×25
	3300	121	85	2	22×30
		102	72	2.1	22×35
	3900	102	72	2.1	25×30
		102	72	2.4	30×25
	4700	85	59	2.4	22×40
		85	59	2.4	25×35
		71	50	2.5	22×50
71		50	2.5	30×30	
5600	71	50	2.5	25×40	
	71	50	2.5	30×30	
	71	50	2.6	35×25	
	59	41	2.8	25×45	
6800	59	41	2.8	30×35	
	49	34	3.2	25×50	
	49	34	3	30×40	
	49	34	3	35×30	
8200	40	28	3.4	30×45	
	40	28	3.4	35×35	
	33	23	3.8	30×50	
	33	23	3.8	35×40	
15000	27	19	4.5	35×50	
	1500	177	124	1.6	22×25
	1800	147	103	1.8	22×25
	2200	121	84	2	22×30
121		84	2	25×25	
2700	98	69	2.2	22×35	
	98	69	2.3	25×30	
	3300	80	56	2.3	22×40
		80	56	2.3	25×35
	80	56	2.3	30×25	

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外形图尺寸表 Dimensions mm



频率系数 Frequency Coefficient

额定电压 Rated voltage(V)	频率 Frequency	50Hz	120Hz	1KHz	10KHz	100KHz
≤ 50		0.90	1.00	1.10	1.15	1.15
63~100		0.90	1.00	1.16	1.30	1.33
≥ 160		0.85	1.00	1.20	1.50	1.55

CD 295 Series



CD 295 系列

Ratings for CD 295 Series

U _R (Surge Voltage) Code (V)	Rated Capa- citan- ce (μF)	Max ESR 20°C 120HZ (mΩ)	Typ ESR 20°C 120HZ (mΩ)	Rated Ripple Current 85°C120HZ (Arms)	Size Φ DXL (mm)
63 (79) 1J	4700	57	33	2.9	30×30
		47	33	3.1	25×45
	5600	47	33	3.2	30×35
		47	33	3.3	35×30
	6800	39	27	3.6	30×40
		39	27	3.7	35×35
	8200	32	23	3.7	30×50
		32	23	3.8	35×40
	10000	27	19	4.3	35×45
	12000	22	16	4.8	35×50
80 (100) 1K	1000	265	186	1.3	22×25
	1200	221	155	1.5	22×30
	1500	177	124	1.7	25×25
	1800	147	103	1.9	22×35
		147	103	1.9	25×30
	2200	121	84	2.1	22×40
		121	84	2.2	25×35
		121	84	2.2	30×2.5
	2700	98	69	2.5	22×50
		98	69	2.5	25×40
		98	69	2.5	30×30
	3300	98	69	2.5	35×25
		80	56	2.8	25×45
		80	56	2.8	30×35
	3900	68	48	3.1	25×50
		68	48	3.2	30×40
	4700	68	48	3.2	35×30
		57	40	3.6	30×45
	5600	57	40	3.6	35×35
		47	33	3.8	30×50
6800	47	33	3.8	35×40	
	22	16	4.1	35×50	
100 (125) 2A	680	390	273	1.1	22×25
	820	324	227	1.2	22×30
	1000	265	186	1.4	25×25
	1200	221	155	1.6	22×35
		221	155	1.6	25×30
	1500	177	124	1.8	22×40
		177	124	1.7	25×35
		177	124	1.8	30×25
	1800	147	103	2.1	22×50
		147	103	2	25×40
		147	103	2.1	30×30
		147	103	2.2	35×25
	2200	121	84	2.2	25×45
		121	84	2.3	30×35
		121	84	2.5	35×30
	2700	98	69	2.6	25×50
		98	69	2.7	30×40
	3300	80	56	3	30×45
		80	56	3.1	35×35
	3900	68	48	3.4	30×50
68		48	3.4	35×40	
4700	57	40	4	35×50	
160 (200) 2C	220	905	633	1	22×25
	270	737	516	1.1	22×25
	330	603	422	1.3	22×25
	390	510	357	1.5	22×30
		510	357	1.5	25×25
	470	424	297	1.7	25×25
		355	249	1.9	22×35
	560	355	249	1.9	25×30
		355	249	2	30×25
	680	293	205	2.1	22×40
		293	205	2.2	25×35
	820	243	170	2.5	22×50

U _R (Surge Voltage) Code (V)	Rated Capa- citan- ce (μF)	Max ESR 20°C 120HZ (mΩ)	Typ ESR 20°C 120HZ (mΩ)	Rated Ripple Current 85°C120HZ (Arms)	Size Φ DXL (mm)
160 (200) 2C	820	243	170	2.4	25×40
		243	170	2.5	30×30
		243	170	2.4	35×25
	1000	199	139	2.7	25×45
		199	139	2.8	30×35
		199	139	2.7	35×30
	120	166	116	3.1	25×50
		166	116	3.2	30×40
		166	116	3	35×35
	1500	133	93	3.7	30×45
		133	93	3.5	35×40
		111	77	3.9	35×45
180 (225) 2K	2200	91	63	4.5	35×50
	270	737	516	1.2	22×25
	330	603	422	1.4	22×30
	390	510	357	1.5	25×25
		424	296	1.7	22×35
	470	424	296	1.8	25×30
		424	296	1.9	30×25
	560	355	249	1.9	22×40
		355	249	2	25×35
	680	293	205	2.3	22×50
		293	205	2.2	25×40
		293	205	2.3	30×30
820	243	170	2.5	25×45	
	243	170	2.6	30×35	
	243	170	2.5	35×30	
1000	199	139	2.9	25×50	
	199	139	2.9	30×40	
1200	166	116	3.3	30×45	
	166	116	3.1	35×35	
1500	133	93	3.6	35×45	
	111	77	4.1	35×50	
200 (250) 2D	220	905	633	1.1	22×25
	270	737	516	1.2	22×25
	330	603	422	1.4	22×30
		603	422	1.4	25×25
	390	510	357	1.6	22×35
		510	357	1.6	25×30
	470	424	296	1.8	22×40
		424	296	1.9	30×25
	560	355	249	2	22×45
		355	249	2	25×35
		355	249	2.1	30×30
	680	355	249	2	35×25
293		205	2.3	25×40	
293		205	2.4	30×35	
820	243	170	2.6	25×50	
	243	170	2.7	30×40	
	243	170	2.5	35×30	
1000	199	139	3.1	30×45	
	199	139	2.8	35×35	
1200	166	116	3.4	30×50	
	166	116	3.2	35×40	
1500	133	93	3.8	35×50	
250 (300) 2E	180	1106	774	0.94	22×25
	220	905	633	1.1	22×30
		905	633	1.1	25×25
	270	737	516	1.2	22×35
		603	422	1.4	22×40
	330	603	422	1.4	25×30
		603	422	1.5	30×25
	390	510	357	1.6	22×45
		510	357	1.6	22×35
	470	424	296	1.8	22×50

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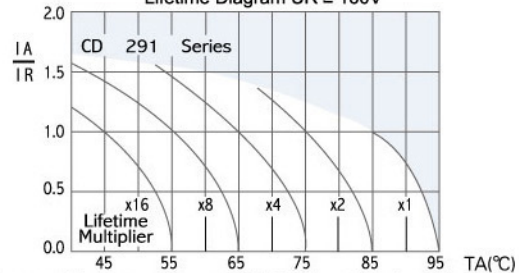


CD 295 系列
Ratings for CD 295 Series

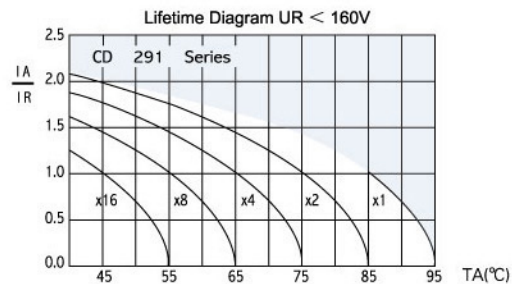
U _R (Surge Voltage) Code (V)	Rated Capacitance (μF)	Max ESR 20°C 120HZ (mΩ)	Typ ESR 20°C 120HZ (mΩ)	Rated Ripple Current 85°C 120HZ (Arms)	Size Φ DXL (mm)	
250 (300) 2E	470	424	296	1.8	25×40	
		424	296	1.8	30×30	
		424	296	1.9	35×25	
	560	355	249	2	25×45	
		355	249	2	30×35	
	680	293	205	2.3	30×40	
		293	205	2.4	35×30	
	820	243	170	2.6	30×45	
		243	170	2.6	35×35	
	1000	199	139	3	35×40	
	1200	166	116	3.4	35×45	
	315 (365) 2F	100	1990	1393	0.67	22×25
120		1659	1161	0.75	22×30	
150		1327	929	0.85	22×30	
		1327	929	0.85	25×25	
180		1106	774	0.96	22×35	
		1106	774	0.96	25×30	
220		905	633	1.1	22×40	
		905	633	1.1	25×30	
		905	633	1.1	25×30	
270		737	516	1.2	22×45	
		737	516	1.3	25×40	
		737	516	1.3	30×30	
		737	516	1.3	35×25	
330		603	422	1.4	25×45	
		603	422	1.4	30×35	
390		510	357	1.6	25×50	
		510	357	1.6	30×40	
470		424	296	1.8	30×45	
		424	296	1.8	35×35	
560		355	249	2	30×50	
		355	249	2	35×40	
680		293	205	2.3	35×45	
350 (400) 2V		82	2427	1699	0.64	22×25
		100	1990	1393	0.72	22×25
		120	1659	1161	0.82	22×30
			1659	1161	0.82	25×25
		150	1327	929	0.94	22×35
			1327	929	0.94	25×30
		180	1106	774	1.1	22×40
			1106	774	1.1	30×25
		220	905	633	1.2	22×45
			905	633	1.2	25×35
			905	633	1.2	30×30
		270	905	633	1.3	35×25
			737	516	1.4	25×45
			737	516	1.4	30×35
	390	510	357	1.7	30×40	
		510	357	1.8	35×40	
	470	424	296	2	30×45	
		424	296	2	35×40	
	560	355	249	2.3	35×45	
	680	293	205	2.6	35×50	
	330	603	422	1.6	25×50	
		603	422	1.6	35×30	
		603	422	1.6	35×30	
	400 (400) 2G	68	2927	2049	0.55	22×25
		82	2427	1699	0.6	22×25
		100	1990	1393	0.7	22×30
			1990	1393	0.7	25×25
		120	1659	1161	0.79	22×35
			1327	929	0.9	22×40
		150	1327	929	0.89	25×30
			1327	929	0.95	30×25
		180	1106	774	1	22×45
			1106	774	1	25×35

U _R (Surge Voltage) Code (V)	Rated Capacitance (μF)	Max ESR 20°C 120HZ (mΩ)	Typ ESR 20°C 120HZ (mΩ)	Rated Ripple Current 85°C 120HZ (Arms)	Size Φ DXL (mm)
400 (400) 2G	180	1106	774	1.1	30×30
		1106	774	1.2	35×25
	220	905	633	1.1	22×50
		905	633	1.2	25×40
		905	633	1.2	30×35
	270	737	516	1.3	25×45
		737	516	1.4	30×40
		737	516	1.6	35×30
	330	603	422	1.6	30×45
		603	422	1.8	30×50
	390	510	357	1.8	35×40
		510	296	2.1	16×31.5
470	424	249	2.3	35×45	
	355	0.052	1750	35×50	
	68	2927	2049	0.57	22×30
450 (500) 2W	82	2427	1699	0.64	22×35
	100	1990	1393	0.72	22×35
		1990	1393	0.73	25×30
	120	1659	1161	0.8	22×40
		1659	1161	0.83	25×35
	150	1327	929	0.95	22×50
		1327	929	0.95	25×40
	180	1106	774	1.1	25×45
		1106	774	1.1	30×35
	220	1106	774	1.2	35×25
		905	633	1.2	25×50
		905	633	1.3	30×40
270	905	633	1.3	35×30	
	737	516	1.4	30×45	
330	737	516	1.5	35×35	
	737	516	1.5	35×35	
390	603	423	1.7	30×50	
470	510	357	1.9	35×45	
470	424	296	2.2	35×50	

寿命曲线 Lifetime Diagram
Lifetime Diagram UR ≥ 160V



IA = actual ripple current at 120HZ, IR = rated ripple current at 120HZ, 85°C
Multiplier of Useful Life as a function of ambient temperature and ripple current load



IA = actual ripple current at 120HZ, IR = rated ripple current at 120HZ, 85°C
Multiplier of Useful Life as a function of ambient temperature and ripple current load