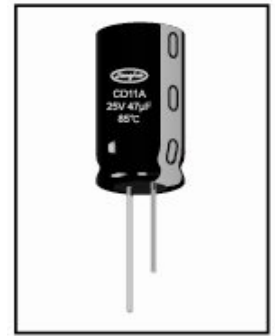


2000h at 85°C

- Load life of 2000 hours at 85°C
- True audio reproduction by the suppression Of electrical noise due to external vibration



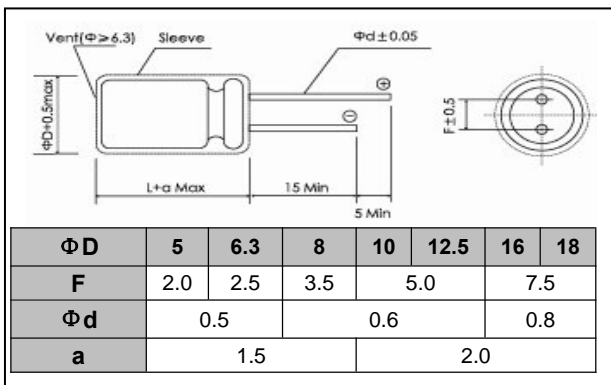
Items	Characteristics																		
Operating Temperature Range(°C)	-40 ~ +85																		
Voltage Range (V)	6.3~ 100																		
Capacitance Tolerance (20°C,120Hz)	±20%																		
Leakage Current (µA)	After 2 minutes at 20°C application of rated voltage, leakage current is not more than 0.001CV or 4, whichever is greater. C:Nominal Capacitance(µF) V:Rated Voltage(V)																		
Dissipation Factor (20°C, 120Hz)	<table border="1"> <thead> <tr> <th>Rated Voltage(V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> </tr> </thead> <tbody> <tr> <td>Tan δ(max)</td> <td>0.3</td> <td>0.25</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> </tr> </tbody> </table>	Rated Voltage(V)	6.3	10	16	25	35	50	63	100	Tan δ(max)	0.3	0.25	0.19	0.16	0.14	0.12	0.10	0.10
	Rated Voltage(V)	6.3	10	16	25	35	50	63	100										
Tan δ(max)	0.3	0.25	0.19	0.16	0.14	0.12	0.10	0.10											
When nominal capacitance is over 1000µF tan δ shall be added 0.02 to the listed value with increase of every 1000µF																			

	Useful Life	Load Life	Endurance Test	Shelf Life
Lifetime	3000h	2000h	2500h	1000h
Leakage Current	Not more than specified value	Not more than specified value	Not more than specified value	Not more than specified value
Capacitance Change	Within ±30% of initial value	Within ±20% of initial value	Within ±20% of initial value	Within ±20% of initial value
Dissipation Factor	Not more than 300% of specified value	Not more than 150% of specified value	Not more than 150% of specified value	Not more than 150% of specified value
Condition: Applied Voltage Applied Current Applied Temperature	U _R I _R 85°C	U _R I _R 85°C	U _R I _R = 0 85°C	U _R = 0 I _R = 0 85°C After test: U _R to be applied for 30min>24h before measurement

Dimensions

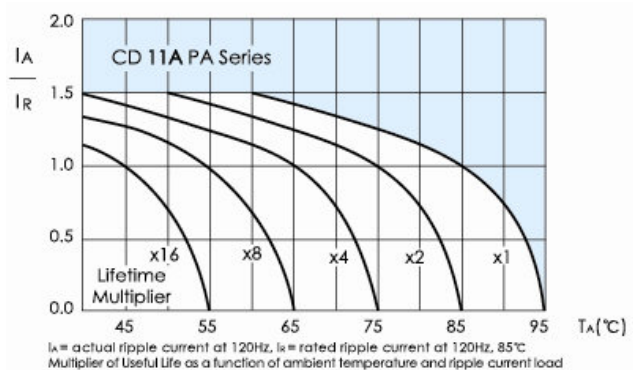
mm

Frequency Coefficient



Rated Voltage(V)	Frequency CV(µFV)	Frequency				
		50~60Hz	120Hz	1kHz	10kHz	100kHz
6.3~16	ALL CV value	0.80	1.00	1.10	1.20	1.20
	≤1000	0.80	1.00	1.50	1.70	1.70
25~35	>1000	0.80	1.00	1.20	1.30	1.30
	≤1000	0.80	1.00	1.60	1.90	1.90
50~100	>1000	0.80	1.00	1.20	1.30	1.30

Lifetime Diagram



Temperature Coefficient

Temperature(°C)	+70	+85
Coefficient	1.35	1

Ratings for CD 11A PA Series

U _R (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Rated Ripple Current 85°C, 120Hz	Size ΦD×L	P/N	
(v)	(μF)	(Ω)	(mA _{rms})	(mm)	-	
6.3 (7.2) 0J	100	3.98	85	5x11.5	ECR0JPA101M□□050011	
	220	1.81	150	6.3x11.5	ECR0JPA221M□□063011	
	330	1.21	180	6.3x11.5	ECR0JPA331M□□063011	
	470	0.85	260	8x11.5	ECR0JPA471M□□080011	
	1000	0.40	450	10x12.5	ECR0JPA102M□□100012	
	2200	0.19	890	12.5x20	ECR0JPA222M□□125020	
	3300	0.14	1050	12.5X20	ECR0JPA332M□□125020	
	4700	0.10	1550	16X25	ECR0JPA472M□□160025	
	6800	0.08	1750	16x25	ECR0JPA682M□□160025	
	10000	0.06	2150	16x31.5	ECR0JPA103M□□160031	
	15000	0.05	2700	18x35.5	ECR0JPA153M□□180035	
	10 (13) 1A	33	10.05	55	5x11.5	ECR1APA330M□□050011
		47	7.06	65	5X11.5	ECR1APA470M□□050011
100		3.32	95	5X11.5	ECR1APA101M□□050011	
220		1.51	165	6.3X11.5	ECR1APA221M□□063011	
330		1.01	240	8x11.5	ECR1APA331M□□080011	
470		0.71	280	8x11.5	ECR1APA471M□□080011	
1000		0.33	540	10X16	ECR1APA102M□□100016	
2200		0.16	970	12.5x20	ECR1APA222M□□125020	
3300		0.12	1250	12.5X25	ECR1APA332M□□125025	
4700		0.09	1650	16X25	ECR1APA472M□□160025	
6800		0.07	2050	16x31.5	ECR1APA682M□□160031	
10000		0.06	2550	18x35.5	ECR1APA103M□□180035	
16 (20) 1C		22	11.46	50	5x11.5	ECR1CPA220M□□050011
	33	7.64	60	5x11.5	ECR1CPA330M□□050011	
	47	5.36	75	5X11.5	ECR1CPA470M□□050011	
	100	2.52	120	6.3X11.5	ECR1CPA101M□□063011	
	220	1.15	220	8X11.5	ECR1CPA221M□□080011	
	330	0.76	270	8x11.5	ECR1CPA331M□□080011	
	470	0.54	390	10x12.5	ECR1CPA471M□□100012	
	1000	0.25	680	10x20	ECR1CPA102M□□100020	
	2200	0.13	1200	12.5x25	ECR1CPA222M□□125025	
	3300	0.10	1600	16X25	ECR1CPA332M□□160025	
	4700	0.07	2050	16x31.5	ECR1CPA472M□□160031	
	6800	0.06	2550	18x35.5	ECR1CPA682M□□180035	
	25 (32) 1E	22	9.65	55	5x11.5	ECR1EPA220M□□050011
33		6.43	70	5x11.5	ECR1EPA330M□□050011	
47		4.52	80	5x11.5	ECR1EPA470M□□050011	
100		2.12	140	6.3x11.5	ECR1EPA101M□□063011	
220		0.97	240	8X11.5	ECR1EPA221M□□080011	
330		0.64	350	10X12.5	ECR1EPA331M□□100012	
470		0.45	460	10x16	ECR1EPA471M□□100016	
1000		0.21	850	12.5x20	ECR1EPA102M□□125020	
2200		0.11	1500	16x25	ECR1EPA222M□□160025	
3300		0.08	1900	16x31.5	ECR1EPA332M□□160031	
4700		0.06	2450	18X35.5	ECR1EPA472M□□180035	
35 (44) 1V		4.7	39.53	25	5X11.5	ECR1VPA4R7M□□050011
		10	18.58	40	5X11.5	ECR1VPA100M□□050011
	22	8.44	60	5x11.5	ECR1VPA220M□□050011	
	33	5.63	75	5x11.5	ECR1VPA330M□□050011	

U _R (Surge Voltage) Code	Rated Capacitance	Max ESR 20°C, 120Hz	Rated Ripple Current 85°C, 120Hz	Size ΦD×L	P/N	
(v)	(μF)	(Ω)	(mA _{rms})	(mm)	-	
35 (44) 1V	47	3.95	100	6.3X11.5	ECR1VPA470M□□063011	
	100	1.86	170	8x11.5	ECR1VPA101M□□080011	
	220	0.84	310	10x12.5	ECR1VPA221M□□100012	
	330	0.56	420	10x16	ECR1VPA331M□□100016	
	470	0.40	540	10x20	ECR1VPA471M□□100020	
	1000	0.19	990	12.5X20	ECR1VPA102M□□125020	
	2200	0.10	1750	16x31.5	ECR1VPA222M□□160031	
	3300	0.07	2250	18X35.5	ECR1VPA332M□□180035	
	50 (63) 1H	0.47	338.80	9	5x11.5	ECR1HPAR47M□□050011
		1	159.24	14	5x11.5	ECR1HPA010M□□050011
2.2		72.38	20	5x11.5	ECR1HPA2R2M□□050011	
3.3		48.25	25	5x11.5	ECR1HPA3R3M□□050011	
4.7		33.88	30	5X11.5	ECR1HPA4R7M□□050011	
10		15.92	40	5X11.5	ECR1HPA100M□□050011	
22		7.24	65	5x11.5	ECR1HPA220M□□050011	
33		4.83	90	6.3x11.5	ECR1HPA330M□□063011	
47		3.39	110	6.3x11.5	ECR1HPA470M□□063011	
100		1.59	190	8x11.5	ECR1HPA101M□□080011	
220		0.72	370	10x16	ECR1HPA221M□□100016	
330		0.48	490	10x20	ECR1HPA331M□□100020	
470		0.34	670	12.5X20	ECR1HPA471M□□125020	
1000	0.16	1250	16x25	ECR1HPA102M□□160025		
2200	0.08	2100	18x35.5	ECR1HPA222M□□180035		
63 (79) 1J	4.7	28.23	30	5x11.5	ECR1JPA4R7M□□050011	
	10	13.27	45	5x11.5	ECR1JPA100M□□050011	
	22	6.03	80	6.3X11.5	ECR1JPA220M□□063011	
	33	4.02	100	6.3X11.5	ECR1JPA330M□□063011	
	47	2.82	140	8X11.5	ECR1JPA470M□□080011	
	100	1.33	250	10x12.5	ECR1JPA101M□□100012	
	220	0.60	440	10x20	ECR1JPA221M□□100020	
	330	0.40	620	12.5x20	ECR1JPA331M□□125020	
	470	0.28	810	12.5x25	ECR1JPA471M□□125025	
	1000	0.13	1500	16X31.5	ECR1JPA102M□□160031	
100 (125) 2A	0.47	282.33	10	5X11.5	ECR2APAR47M□□050011	
	1	132.70	15	5x11.5	ECR2APA010M□□050011	
	2.2	60.32	20	5X11.5	ECR2APA2R2M□□050011	
	3.3	40.21	25	5x11.5	ECR2APA3R3M□□050011	
	4.7	28.23	30	5x11.5	ECR2APA4R7M□□050011	
	10	13.27	55	6.3x11.5	ECR2APA100M□□063011	
	22	6.03	95	8X11.5	ECR2APA220M□□080011	
	33	4.02	140	10X12.5	ECR2APA330M□□100012	
	47	2.82	180	10x16	ECR2APA470M□□100016	
	100	1.33	340	12.5x20	ECR2APA101M□□125020	
	220	0.60	640	16x25	ECR2APA221M□□160025	
	330	0.40	780	16x25	ECR2APA331M□□160025	
	470	0.28	1000	16X31.5	ECR2APA471M□□160031	

Customer products are available on request.