

ALUMINUM ELECTROLYTIC CAPACITOR

Suntan®

105°C, LOW IMPEDANCE, LONG LIFE

TS13D CD287

FEATURES

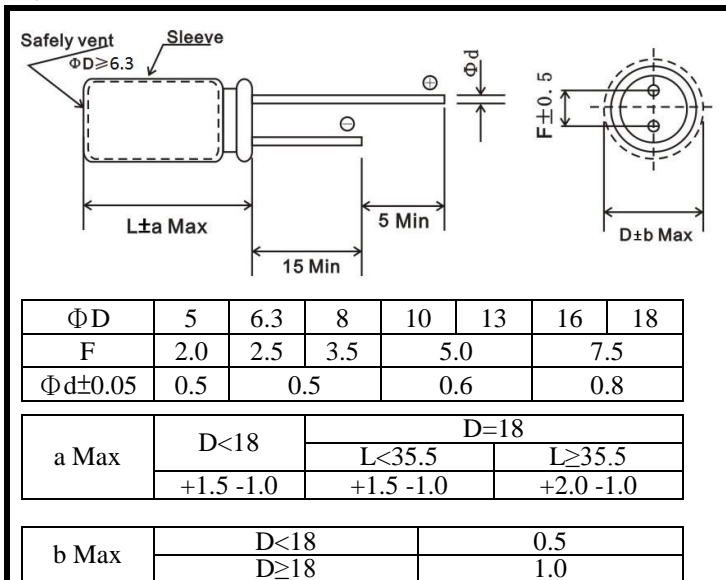
- Load life of 5000 hours at 105°C
- at 55°C (Φ5~Φ6: 2000hours Φ8~Φ10: 3000hours)
- Ultra lower impedance
- Switch power supply
- Excellent ripple current capability



◆ Specifications

I T E M S		P E R F O R M A N C E C H A R A C T E R I S T I C S							
Operating Temperature Range(°C)	-40~+105								
Rated Voltage Range (V)	6.3~100								
Capacitance Range (μF)	0.47~15000								
Capacitance Tolerance(25°C, 120Hz)	±20%								
Leakage Current(μA)	I≤0.02CV or 3uA, whichever is greater (after 2 minutes at 25°C) Where, C: Nominal Capacitance (μF) V: Rated Voltage (V)								
Dissipation Factor(25°C, 120Hz)	Wv (V)	6.3	10	16	25	35	50	63	100
	Tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08
0.02 is added to each 1000 μF increase over 1000 μF									
Temperature Stability (120Hz)	Rated Voltage	6.3	10	16	25	35	50	63	100
	Z-40°C/Z+20°C	3	3	3	3	3	3	3	3
Load Life (105°C)	Time	5000hours (Φ5~6: 2000hours Φ8~10: 3000hours)							
	Leakage Current	Not more than the specified value.							
	Capacitance Change	Within±20% of the initial value							
	Dissipation Factor	Not more than 200% of the specified value.							
Shelf Life (105°C)	After leaving capacitors under no load at 105°C for 1000 hours, they meet the specified value for load life Characteristics listed above. *after test: UR to be applied for 30 minutes, 24 to 48 hours before measurement.								

◆ Dimensions



◆ Multiplier for ripple current

Frequency coefficient

Freq(Hz)	120	1K	10K	100K
Cap(μF)				
0.47~4.7	0.40	0.68	0.78	1.0
5.6~47	0.50	0.76	0.87	1.0
56~270	0.70	0.85	0.90	1.0
330~1000	0.80	0.93	0.98	1.0
1200~15000	0.90	0.95	1.0	1.0

Dia	Life Time
5~6.3	2000h
8~10	3000h
≥13	5000h

Temperature coefficient

Temperature	+70	+85	+105
Factor	1.96	1.68	1.0

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◆ STANDARD RATINGS

V μF	6.3V				10V			
	DxL	Rated Ripple Current (mA.m.s./105°C 100KHZ)	Impedance (Ωmax)		DxL	Rated Ripple Current (mA.m.s./105°C 100KHZ)	Impedance (Ωmax)	
			20°C 100KHz	-10°C 100KHz			20°C 100KHz	-10°C 100KHz
100	--	--	--	--	5x11	235	0.460	0.920
120	--	--	--	--	5x11	245	0.380	0.750
150	5x11	232	0.460	0.920	5x11	260	0.350	0.700
180	5x11	250	0.400	0.700	6.3x11	290	0.310	0.620
220	6.3x11	290	0.300	0.600	6.3x11	395	0.200	0.400
270	6.3x11	330	0.250	0.500	6.3x11	450	0.180	0.380
330	6.3x11	360	0.200	0.400	8x12	490	0.170	0.340
390	6.3x12	420	0.180	0.380	8x12	530	0.150	0.300
470	8x12	486	0.170	0.340	8x12	585	0.130	0.260
560	8x12	500	0.150	0.300	8x12	660	0.100	0.300
680	8x12	615	0.130	0.260	8x12	780	0.095	0.190
820	8x14	715	0.100	0.230	8x16	850	0.080	0.150
1000	8x16	798	0.095	0.190	8x16	1000	0.060	0.130
1200	8x16	1005	0.065	0.130	10x17	1140	0.055	0.110
1500	8x16	1185	0.055	0.110	10x21	1430	0.045	0.090
1800	10x17	1200	0.050	0.100	10x25	1450	0.042	0.084
2200	10x20	1430	0.045	0.090	13x20	1680	0.036	0.072
2700	10x21	1680	0.038	0.076	13x21	1850	0.032	0.064
3300	13x20	1720	0.036	0.060	13x20	2210	0.028	0.056
3900	13x25	1940	0.032	0.064	--	--	--	--
4700	13x25	2210	0.028	0.056	13x25	2100	0.027	0.054
5600	16x26	2300	0.026	0.052	16x30	2350	0.025	0.050
6800	16x26	2340	0.025	0.050	16x30	2540	0.022	0.044
8200	16x32	2530	0.022	0.044	16x35	2950	0.020	0.040
10000	16x35	2560	0.021	0.043	16x40	3000	0.018	0.036

V μF	16V				25V			
	DxL	Rated Ripple Current (mA.m.s./105°C 100KHZ)	Impedance (Ωmax)		DxL	Rated Ripple Current (mA.m.s./105°C 100KHZ)	Impedance (Ωmax)	
			20°C 100KHz	-10°C 100KHz			20°C 100KHz	-10°C 100KHz
15	5x12	95	0.800	1.700	--	--	--	--
22	--	--	--	--	5x11	170	0.700	1.400
47	5x11	160	0.700	1.500	5x11	195	0.600	1.200
56	5x11	175	0.650	1.300	5x11	230	0.460	0.920
68	5x12	200	0.500	1.200	5x12	260	0.380	0.700
82	--	--	--	--	6.3x11	290	0.310	0.620
100	6.3x11	250	0.500	1.500	6.3x11	350	0.270	0.500
120	6.3x11	290	0.310	0.620	6.3x11	375	0.200	0.400
150	6.3x11	350	0.250	0.550	8x12	450	0.180	0.380
180	6.3x11	380	0.200	0.400	8x12	503	0.170	0.340
220	6.3x11	450	0.180	0.380	8x12	565	0.130	0.260
270	8x12	501	0.170	0.340	8x14	658	0.090	0.180
330	8x12	565	0.130	0.260	8x14	850	0.080	0.150
390	--	--	--	--	8x20	920	0.070	0.140
470	8x12	740	0.095	0.190	10x17	1000	0.065	0.130
560	8x16	870	0.080	0.150	8x20	1180	0.055	0.110
680	8x16	1000	0.065	0.130	10x17	1200	0.050	0.100
820	8x20	1170	0.055	0.110	10x25	1350	0.045	0.090
1000	10x17	1250	0.050	0.100	13x20	1680	0.036	0.072
1200	10x21	1380	0.042	0.084	13x20	1850	0.032	0.068
1500	13x20	1660	0.038	0.076	13x20	1940	0.030	0.060
1800	13x20	1750	0.035	0.070	13x25	2050	0.028	0.056
2200	13x20	1930	0.032	0.064	13x25	2380	0.024	0.048
2700	16x26	2210	0.028	0.056	13x25	2390	0.023	0.046
3300	13x30	2380	0.026	0.052	16x26	2460	0.022	0.045
3900	16x26	2390	0.025	0.050	16x26	2720	0.020	0.038
4700	16x26	3290	0.022	0.044	16x26	3050	0.018	0.036
5600	16x35	3300	0.020	0.040	--	--	--	--
6800	18x25	3380	0.019	0.038	--	--	--	--

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◆ STANDARD RATINGS

μF \ V	35V				50V			
	DxL	Rated Ripple Current (mA.m.s./105°C 100KHZ)	Impedance (Ωmax)		DxL	Rated Ripple Current (mA.m.s./105°C 100KHZ)	Impedance (Ωmax)	
			20°C 100KHz	-10°C 100KHz			20°C 100KHz	-10°C 100KHz
1	--	--	--	--	5x11	36	3.500	7.000
2.2	--	--	--	--	5x11	54	3.000	6.000
3.3	--	--	--	--	5x11	63	2.600	5.200
4.7	5x11	110	0.420	0.980	5x11	75	2.200	4.400
6.8	5x11	120	0.470	1.170	5x11	90	2.000	3.800
10	5x11	130	0.480	0.200	5x12	110	1.400	2.800
15	5x11	150	0.500	1.150	5x12	180	1.120	2.000
18	5x11	167	0.570	1.180	5x12	220	0.950	1.900
22	5x11	170	0.600	1.200	6.3x11	222	0.600	1.700
27	5x11	175	0.650	1.300	6.3x11	225	0.550	1.100
33	6.3x11	223	0.500	0.850	6.3x11	230	0.450	0.900
39	6.3x11	237	0.460	0.920	6.3x11	270	0.360	0.720
47	6.3x11	250	0.280	0.700	6.3x12	300	0.250	0.620
56	6.3x11	290	0.260	0.600	6.3x12	320	0.280	0.560
68	6.3x11	350	0.250	0.500	8x12	360	0.200	0.400
82	6.3x11	390	0.200	0.400	8x12	450	0.180	0.360
100	8x12	450	0.180	0.370	8x12	600	0.150	0.300
120	8x12	501	0.170	0.340	8x20	670	0.130	0.260
150	8x12	650	0.150	0.300	8x20	700	0.100	0.230
180	8x14	680	0.130	0.260	8x20	735	0.095	0.190
220	10x17	770	0.095	0.190	10x17	825	0.085	0.150
270	10x17	885	0.080	0.160	10x21	880	0.055	0.170
330	10x17	1000	0.065	0.130	10x21	965	0.052	0.120
390	10x17	1170	0.055	0.110	13x20	1000	0.050	0.100
470	10x17	1280	0.050	0.100	13x20	1170	0.044	0.088
560	10x25	1430	0.045	0.090	13x21	1180	0.043	0.087
680	13x20	1670	0.038	0.076	13x21	1300	0.040	0.080
820	13x20	1685	0.036	0.070	13x30	1350	0.039	0.079
1000	13x25	1700	0.034	0.068	13x35	1480	0.038	0.076
1200	16x25	2070	0.028	0.056	16x25	1870	0.032	0.064
1500	16x25	2250	0.027	0.053	16x25	2170	0.028	0.056
1800	16x26	2330	0.025	0.050	16x26	2400	0.026	0.052
2200	16x26	2540	0.022	0.044	16x32	2300	0.025	0.050
2700	16x35	2890	0.020	0.040	16x35	2500	0.024	0.048
3300	16x35	3100	0.018	0.036	18x40	2800	0.022	0.038
3900	18x40	3320	0.015	0.030	18x40	3000	0.020	0.018
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μF \ V	63V				100V			
	DxL	Rated Ripple Current (mA.m.s./105°C 100KHZ)	Impedance (Ωmax)		DxL	Rated Ripple Current (mA.m.s./105°C 100KHZ)	Impedance (Ωmax)	
			20°C 100KHz	-10°C 100KHz			20°C 100KHz	-10°C 100KHz
10	5x11	100	1.400	4.000	6.3x11	65	1.200	6.800
22	6.3x11	150	0.750	2.400	8x12	275	0.530	2.100
33	6.3x11	160	0.600	1.500	10x13	370	0.350	1.400
47	8x12	360	0.320	0.960	10x17	450	0.300	1.200
68	10x13	475	0.240	0.720	10x21	630	0.180	0.720
100	10x17	600	0.150	0.450	10x20	730	0.150	0.600
220	10x21	965	0.075	0.230	16x26	1260	0.075	0.300
330	13x20	1050	0.065	0.200	16x26	1600	0.059	0.230
470	13x20	1450	0.048	0.140	16x31	1900	0.045	0.180
680	16x26	1870	0.042	0.130	--	--	--	--
1000	16x26	2400	0.032	0.096	--	--	--	--
1200	16x30	2530	0.031	0.095	--	--	--	--
2200	18x40	2620	0.028	0.011	--	--	--	--

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◆ Typical Curves

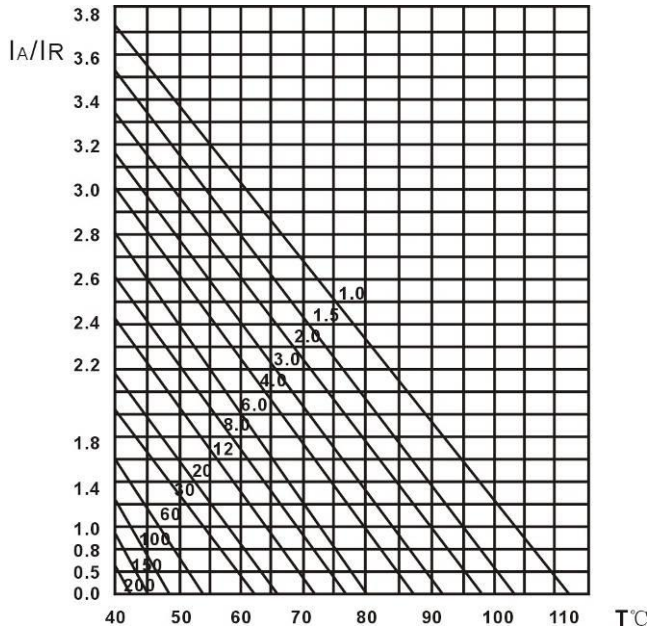


Fig.4 Multiplier of useful life as a function of ambient temperature and ripple current load
 I_A = actual ripple current 120KHz
 I_R = rated ripple current at 100KHz, 105°C

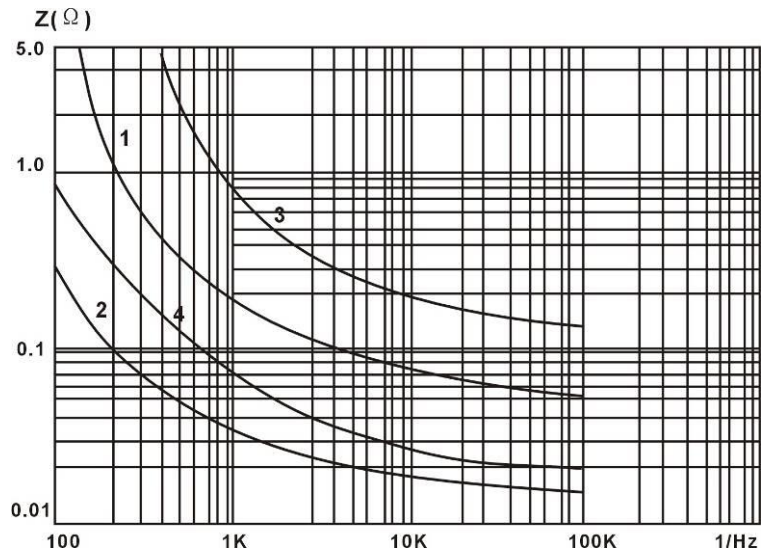


Fig.3 Typical impedance as a function of frequency

1.	10V1000 μ F	10x20
2.	10V10000 μ F	18x35.5
3.	63V100 μ F	10x20
4.	63V1000 μ F	18x35.5

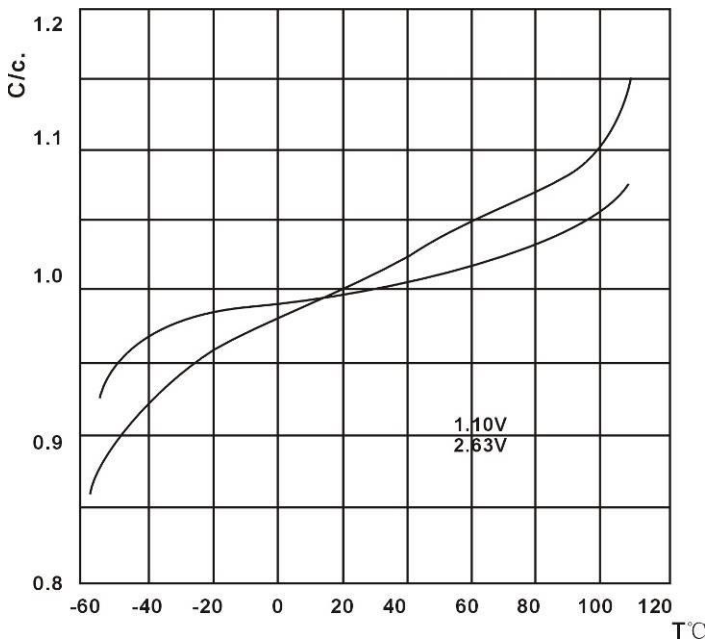


Fig. 1 Typical multiplier of capacitance as a function of ambient temperature
 C_0 = capacitance at 25°C, 120Hz

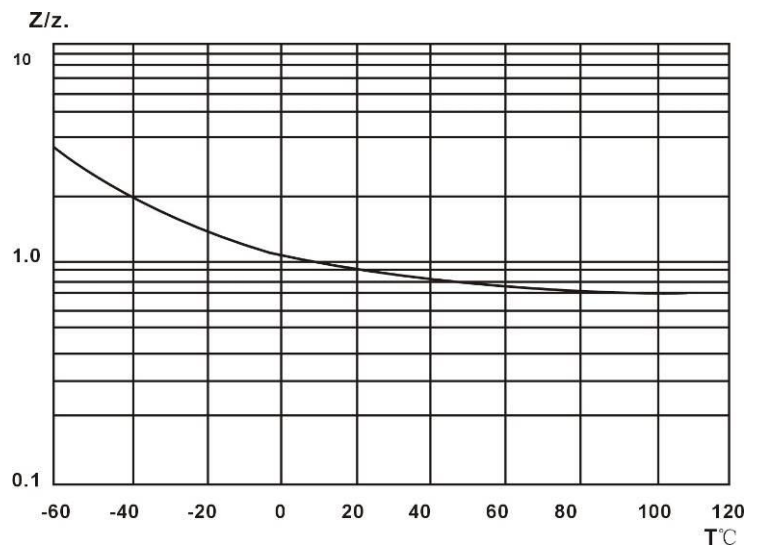


Fig. 2 Typical multiplier of impedance as a function of ambient temperature
 Z_0 – typical impedance to 25°C, 100KHz

Note: Specifications are subject to change without notice. For more detail and update, please visit our website.