

# ALUMINUM ELECTROLYTIC CAPACITOR

Suntan®

GENERAL, MINIATURIZED, LONG LIFE

# TS13D CD295

## FEATURES

- Load life of 5000 hours at 85°C, equal to 80000 Hours (9 years) at 45°C
- High ripple current
- Smaller size
- PCB Mounting

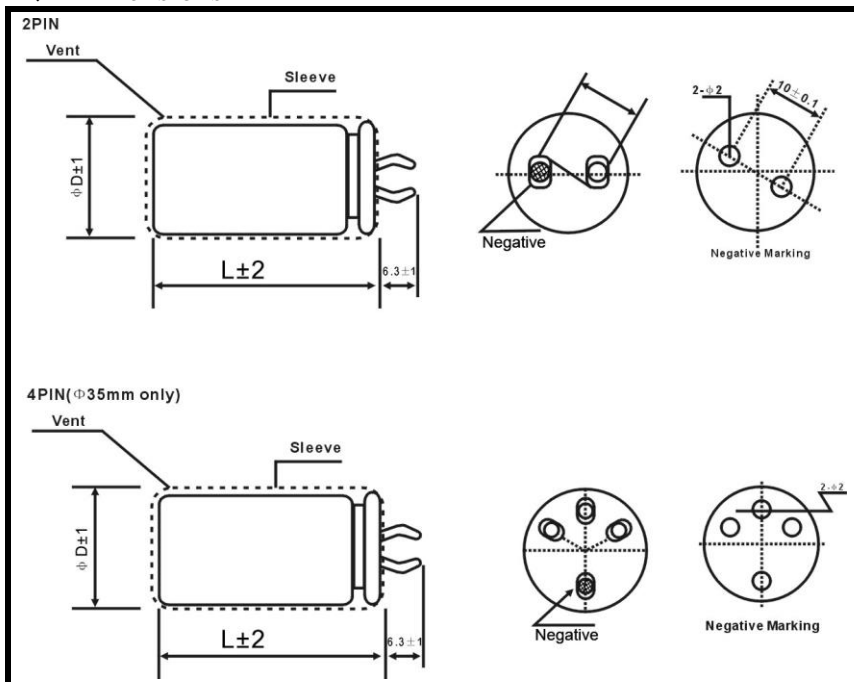


## ◆ Specifications

ITEMS		PERFORMANCE CHARACTERISTICS							
Operating Temperature Range(°C)		10V~100V: -40+85°C 160V~450V: -25~+85°C							
Capacitance Tolerance(25°C, 120Hz)		±20%							
Leakage Current(μA)		0.01CV or 1.5mA whichever is smaller. (at 25°C, after 5 minutes) C: Nominal Capacitance (μF) V: Rated Voltage (V)							
Dissipation Factor(25°C, 120Hz)	Rated Voltage (V)	10	16	25	35	50	63~100	160~250	315~450
	Tan δ (Max)	0.80	0.60	0.50	0.40	0.30	0.20	0.15	0.15
Temperature Stability (120Hz)	Rated Voltage (V)	10	16~35	50~100	160~200	250~400	4	0	
	Impedance	Z-25°C/Z+20°C	5	4	3	3	4	4	
	Ratio	Z-40°C/Z+20°C	18	15	10	6	8	--	
Load Life (+85°C)	Time	5000hours							
	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 (+85°C)		After storage for 1000hours at 85°C with no voltage applied, the capacitor shall meet the specified limits for "Load Life" after test: U <sub>R</sub> to be applied for 60 minutes, 24 to 48 hours before measurement.							

## ◆ Dimensions

mm



## ◆ Multiplier for ripple current

### Frequency coefficient

Frequency(Hz)	50	120	1K	10K	20K
Rated Voltage(V)					
≤50	0.95	1	1.10	1.15	1.15
63~100	0.95	1	1.16	1.30	1.33
≥160	0.90	1	1.20	1.50	1.55

### Temperature coefficient

Temperature(°C)	+40	55	+70	+85
Rated Voltage(V)				
<160	2.1	1.8	1.5	1.0
≥160	1.7	1.5	1.3	1.0

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## ◆ STANDARD RATINGS

WV(V) / □DxL (mm)	10		16		25		35		50		63		80		100	
	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple
	uF	Arms	uF	Arms	uF	Arms	uF	Arms	uF	Arms	uF	Arms	uF	Arms	uF	Arms
22x25	10000	2.5	8200	2.2	5600	2.0	3300	1.8	2200	1.7	1500	1.6	1000	1.3	680	1.1
22x30	15000	3.2	10000	2.6	6800	2.3	3900	2.1	2700	1.9	2200	2.0	1200	1.5	820	1.2
22x35	18000	3.6	12000	2.9	8200	2.6	5600	2.3	3900	2.1	2700	2.2	1800	1.9	1200	1.6
22x40	22000	4.0	15000	3.3	10000	2.9	6800	2.9	4700	2.4	3300	2.3	2200	2.1	1500	1.8
22x45	--	--	18000	3.8	12000	3.3	--	--	--	--	3900	2.5	--	--	--	--
22x50	--	--	22000	4.2	--	--	8200	2.8	5600	2.5	--	--	2700	2.5	1800	2.1
25x25	15000	3.1	10000	2.6	6800	2.3	4700	2.2	2700	1.9	2200	2.0	1500	1.7	1000	1.4
25x30	18000	3.6	15000	3.3	10000	2.8	5600	2.3	3900	2.1	2700	2.3	1800	1.9	1200	1.6
25x35	22000	4.1	18000	3.7	12000	3.2	6800	2.6	4700	2.4	3300	2.3	2200	2.2	1500	1.7
25x40	--	--	22000	4.2	15000	3.7	8200	2.8	5600	2.5	3900	2.6	2700	2.5	1800	2.0
25x45	--	--	--	--	--	--	10000	3.1	6800	2.8	5600	3.1	3300	2.8	2200	2.2
25x50	--	--	--	--	18000	4.3	12000	3.5	8200	3.2	--	--	3900	3.1	2700	2.6
30x25	22000	4.1	15000	3.4	10000	3.0	6800	2.7	3900	2.4	3300	2.3	2200	2.2	1500	1.8
30x30	--	--	22000	4.2	12000	3.4	8200	2.8	5600	2.5	3900	2.6	2700	2.5	1800	2.1
30x35	--	--	--	--	18000	4.2	10000	3.2	6800	2.8	5600	3.2	3300	2.8	2200	2.3
30x40	--	--	--	--	22000	4.8	12000	3.5	8200	3.0	6800	3.6	3900	3.2	2700	2.7
30x45	--	--	--	--	--	--	15000	4.1	10000	3.4	--	--	4700	3.6	3300	3.0
30x50	--	--	--	--	--	--	18000	4.6	12000	3.8	8200	3.7	5600	3.5	3900	3.4
35x25	--	--	22000	4.4	15000	3.9	8200	2.9	5600	2.6	3900	2.7	2700	2.5	1800	2.2
35x30	--	--	--	--	18000	4.4	12000	3.6	8200	3.0	5600	3.3	3900	3.2	2200	2.5
35x35	--	--	--	--	22000	5.0	15000	4.1	10000	3.4	6800	3.7	4700	3.6	3300	3.1
35x40	--	--	--	--	--	--	18000	4.7	12000	3.8	8200	3.8	5600	3.5	3900	3.4
35x45	--	--	--	--	--	--	22000	5.3	--	--	10000	4.3	--	--	--	--
35x50	--	--	--	--	--	--	--	--	15000	4.5	12000	4.8	6800	4.4	4700	4.0

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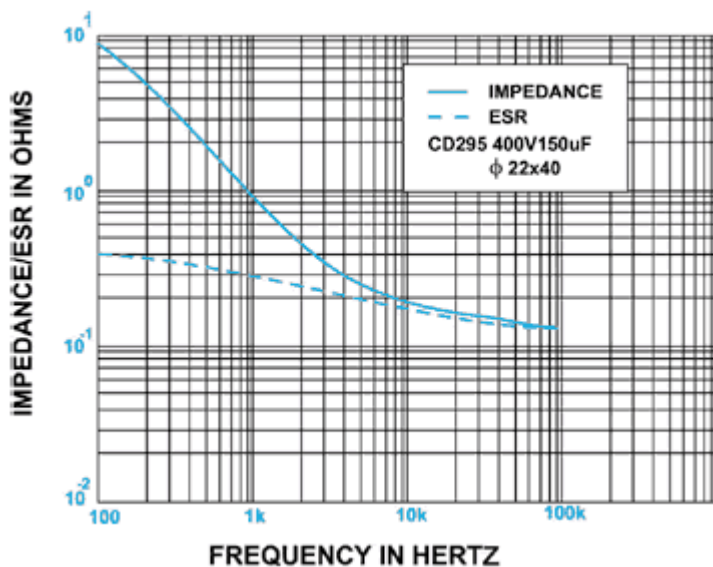
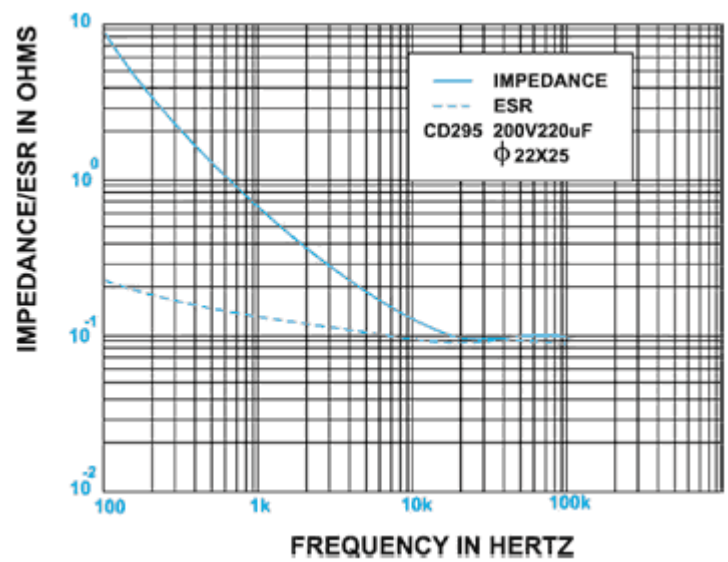
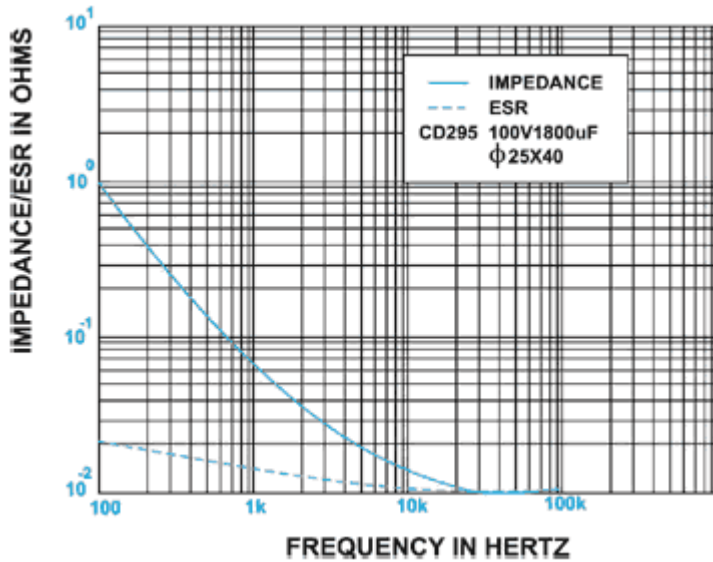
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## ◆ STANDARD RATINGS

WV(V) / □DxL (mm)	160		180		200		250		315		350		400		450	
	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple	Cap	Ripple
	uF	Arms	uF	Arms	uF	Arms	uF	Arms	uF	Arms	uF	Arms	uF	Arms	uF	Arms
22x25	330	1.3	270	1.2	220	1.1	180	0.94	100	0.67	82	0.64	68	0.55	--	--
22x30	390	1.5	330	1.4	330	1.4	220	1.1	150	0.85	120	0.82	100	0.70	68	0.57
22x35	560	1.9	470	1.7	390	1.6	270	1.2	180	0.96	150	0.94	120	0.79	100	0.72
22x40	680	2.1	560	1.9	470	1.8	330	1.4	220	1.1	180	1.1	150	0.90	120	0.80
22x45	--	--	--	--	560	2.0	390	1.6	270	1.2	220	1.2	180	1.0	--	--
22x50	820	2.5	680	2.3	--	--	470	1.8	--	--	--	--	220	1.1	150	0.95
25x25	390	1.5	390	1.5	330	1.4	220	1.1	150	0.85	120	0.81	100	0.70	--	--
25x30	560	1.9	470	1.7	390	1.6	330	1.4	180	0.96	150	0.94	150	0.89	100	0.73
25x35	680	2.2	560	2.0	560	2.0	390	1.6	220	1.1	220	1.2	180	1.0	120	0.83
25x40	820	2.4	680	2.2	680	2.3	470	1.8	270	1.3	--	--	220	1.2	150	0.95
25x45	1000	2.7	820	2.5	--	--	560	2.0	330	1.4	270	1.4	270	1.3	180	1.1
25x50	1200	3.1	1000	2.9	820	2.6	--	--	390	1.6	330	1.6	--	--	220	1.2
30x25	560	2.0	470	1.8	470	1.9	330	1.5	220	1.1	180	1.1	150	0.95	--	--
30x30	820	2.5	680	2.3	560	2.1	470	1.8	270	1.3	220	1.2	180	1.1	150	0.98
30x35	1000	2.8	820	2.6	680	2.4	560	2.0	330	1.4	270	1.4	220	1.2	180	1.1
30x40	1200	3.2	1000	2.9	820	2.7	680	2.3	390	1.6	390	1.7	270	1.4	220	1.3
30x45	1500	3.7	1200	3.3	1000	3.1	820	2.6	470	1.8	470	2.0	330	1.6	270	1.4
30x50	--	--	--	--	1200	3.4	--	--	560	2.0	--	--	390	1.8	--	--
35x25	820	2.4	680	2.2	560	2.0	470	1.9	270	1.3	220	1.3	180	1.2	180	1.2
35x30	1000	2.7	820	2.5	820	2.5	680	2.4	390	1.6	330	1.6	270	1.5	220	1.3
35x35	1200	3.0	1200	3.1	1000	2.8	820	2.6	470	1.8	390	1.8	330	1.7	270	1.5
35x40	1500	3.5	--	--	1200	3.2	1000	3.0	560	2.0	470	2.0	390	1.8	--	--
35x45	1800	3.9	1500	3.6	--	--	1200	3.4	680	2.3	560	2.3	470	2.1	390	1.9
35x50	2200	4.5	1800	4.1	1500	3.8	--	--	--	--	680	2.6	560	2.3	470	2.2

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## ◆ TYPICAL CURVES



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