

# ALUMINUM ELECTROLYTIC CAPACITOR

Suntan®

GENERAL, MINIATURIZED

# TS13D CD13

## FEATURES

- Standard product
- For industrial equipment control etc



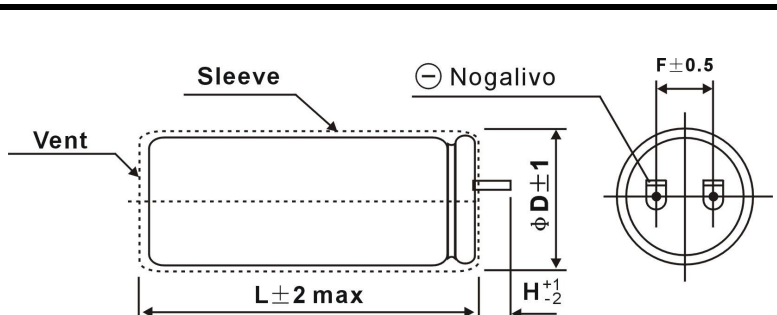
## ◆ Specifications

ITEMS		PERFORMANCE CHARACTERISTICS					
Operating Temperature Range(°C)		-40~+85 (16~100V), -25~+85 (160~450V)					
Rated Voltage Range(V)		16~450					
Capacitance Range(μF)		33~68000					
Capacitance Tolerance(25°C, 120Hz)		-10%~+50%					
Leakage Current(μA)		3CV(μA) Max (25°C, after 5 minutes) C: Nominal Capacitance (μF) V: Rated Voltage (V)					
Dissipation Factor(25°C, 120Hz)	Rated Voltage (V)	16~25		35~63		80~350	400~450
	Cap (μF)	33000~10000	15000~33000	47000~68000	1000~10000	15000~33000	47~10000
	Tan δ (Max)	0.35	0.50	0.75	0.25	0.35	0.20
Temperature Stability (120Hz)	Rated Voltage (V)	16~100		160~250		315~450	
	Impedance	Z-25°C/Z+20°C		3		8	
	Ratio	Z-40°C/Z+20°C		12		--	
Load Life (85°C)	Time	1000hours					
	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)	Time	1000hours					
	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.					

After test: U<sub>R</sub> to be applied for 60 minutes, 24 to 48 hours before measurement.

## ◆ Dimensions

mm



ΦD	22	25	30	35	40
F	8.5	10	14	14	14
H	10	12	12	12	12

## ◆ Multiplier for ripple current

### Frequency coefficient

Frequency(Hz)	50	60	120	1K	10K	≥50K
Rated Voltage(V)						
16~100	0.88	0.90	1.00	1.15	1.15	1.15
160~250	0.77	0.80	1.00	1.50	1.60	1.63
315~450	0.88	0.90	1.00	1.15	1.15	1.15

### Temperature coefficient

Temperature(°C)	+20	+45	+70	+85
Factor	1.50	1.48	1.30	1.00

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## ◆ STANDARD RATINGS

WV (V) / Cap (uF)	16	25	35	50	60	80	100
470	--	--	--	--	--	--	22x30
680	--	--	--	--	--	22x30	22x40
1000	--	--	--	--	22x30	22x40	25x40
1500	--	--	--	22x30	22x40	22x40	25x50
2200	--	--	22x30	22x40	25x40	25x50	30x50
3300	--	22x30	22x40	25x40	25x50	30x50	35x50
4700	22x30	22x40	25x40	25x50	30x50	35x50	35x63
6800	22x30	25x40	25x50	30x50	30x50	35x63	35x100
10000	25x40	25x50	30x50	35x63	35x80	35x100	--
15000	30x50	30x63	35x63	35x80	35x100	--	--
22000	30x63	35x63	35x80	35x100	--	--	--
33000	35x63	35x80	40x100	--	--	--	--
47000	35x80	40x100	--	--	--	--	--
68000	40x100	--	--	--	--	--	--

WV (V) / Cap (uF)	160	200	250	315	350	400	450
33	--	--	--	--	--	22x30	22x30
47	--	--	--	22x30	22x30	22x40	22x40
68	--	--	22x30	22x40	22x40	25x40	25x40
100	--	22x30	22x40	25x40	25x40	25x50	30x50
150	22x30	22x40	25x40	25x50	25x50	30x50	35x50
220	22x40	25x40	25x50	30x50	30x50	35x50	35x63
330	25x50	25x50	30x50	35x50	35x50	35x63	35x80
470	30x50	30x50	35x50	35x63	35x80	35x100	40x100
680	35x50	35x50	35x63	35x80	35x100	40x100	--
1000	35x63	35x63	35x80	40x100	40x100	--	--
1500	35x80	35x100	40x100	--	--	--	--
2200	40x100	40x100	--	--	--	--	--

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