ALUMINUM ELECTROLYTIC CAPACITORS

nichicon

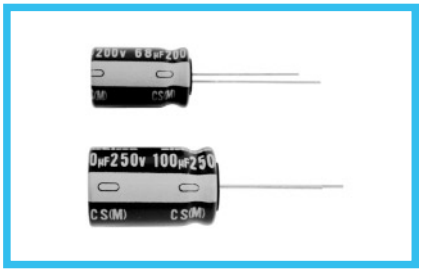
CS series

Miniature Sized, High Ripple Current, High Reliability

Smaller | Long Life | High Ripple Current

- High ripple current and Long Life product withstanding load life of 8000 to 10000 hours at +105°C.
- Suited for ballast application.
- Compliant to the RoHS directive (2002/95/EC).

CA
Smaller
CS
Smaller
CY



■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +105°C (160 to 400V) , −25 to +105°C (450V)
Rated Voltage Range	160 to 450V
Rated Capacitance Range	6.8 to 330µF
Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	After 1 minute's application of rated voltage, leakage current is not more than 0.04CV+100 (µA)
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz, Temperature : 20°C

Rated voltage (V)	160	200	250	350	400	450
tan δ (MAX.)	0.20	0.20	0.20	0.24	0.24	0.24

Stability at Low Temperature — Measurement frequency : 120Hz

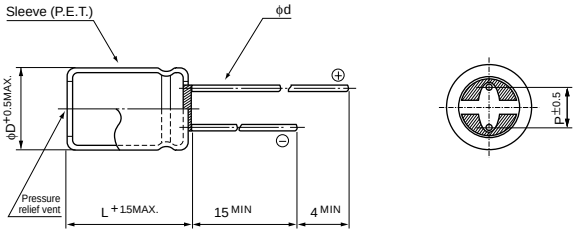
Rated voltage (V)		160	200	250	350	400	450
Impedance ratio ZT / Z20 (MAX.)	Z−25°C / Z+20°C	3	3	3	5	5	6
	Z−40°C / Z+20°C	6	6	6	6	6	–

Endurance — The specifications listed at right shall be met when the capacitors are restored to 20°C after D.C. bias plus rated ripple current is applied for 10000 hours (8000 hours for φD=10) at 105°C, the peak voltage shall not exceed the rated voltage.

Capacitance change	Within ±20% of the initial capacitance value
tan δ	200% or less than the initial specified value
Leakage current	Less than or equal to the initial specified value

Shelf Life	After storing the capacitors under no load at 105°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Marking	Printed with white color letter on dark brown sleeve.

■Radial Lead Type



(mm)

φD	10	12.5	16	18
P	5.0	5.0	7.5	7.5
φd	0.6	0.6	0.8	0.8

• Please refer to page 20 about the end seal configulation.

Type numbering system (Example : 250V 100µF)

1	2	3	4	5	6	7	8	9	10	11	12
U	C	S	2	E	1	0	1	M	H	D	

Size code
Configuration※
Capacitance tolerance (±20%)
Rated capacitance (100µF)
Rated voltage (250V)
Series name
Type

※Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
10	PD
12.5 to 18	HD

Please refer to page 20, 21, 22 about the formed or taped product spec.
Please refer to page 4 for the minimum order quantity.

● Dimension table in next page.

CS series

■Dimensions

Cap \ V	Code	160		200		250		350		400		450	
		2C		2D		2E		2V		2G		2W	
6.8	6R8							10×16	280	10×16	280	10×20	280
10	100	10×16	320	10×16	320	10×20	350	10×20	350	10×20	350	12.5×20	450
15	150									12.5×20	550	12.5×25	600
22	220	10×20	500	10×20	500	10×20	500	12.5×20	650	12.5×20	760	16×20	730
33	330	10×20	650	10×20	650	12.5×20	800	16×20	900	16×20	900	16×25	980
												▲18×20	980
47	470	10×20	750	12.5×20	980	12.5×20	980	16×20	1080	16×25	1180	18×25	1200
										▲18×20	1180		
68	680	12.5×20	1180	12.5×20	1300	16×20	1300	16×25	1400	18×25	1470	18×31.5	1575
								▲18×20	1375				
82	820	12.5×20	1275	16×20	1380	16×20	1380	18×25	1530	18×25	1525		
100	101	12.5×25	1420	16×20	1420	16×25	1530	18×25	1575				
		▲16×20	1420										
150	151	16×20	1890	16×25	1890	18×25	1940						
220	221	16×25	2370	18×25	2365	18×31.5	3130					Case size	※
330	331	18×31.5	3130	18×35.5	3220							ϕD×L (mm)	

※: Rated ripple current (mArms) at 105°C 100kHz

▲: In this case, 6 will be put at 12th digit of type numbering system.

• Frequency coefficient of rated ripple current

Frequency	50Hz	120Hz	1kHz	10kHz	100kHz or more
Coefficient	0.40	0.50	0.80	0.90	1.00