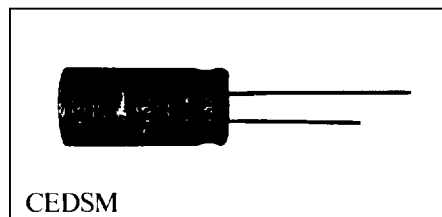


CEDSM SERIES

MINIATURE RADIAL TYPE

• FEATURES

1. Miniaturized, smaller than SEM series.
2. Suitable for miniaturings of electronic equipment.
3. 85°C, 2000 hrs. guaranteed.
4. Washable with Freon TE, TES, TMS for 5 minutes.



CEDSM

• GENERAL SPECIFICATIONS

Operating temperature range -40°C ~ +85°C

Rated voltage range 6.3 ~ 50VDC

Nominal capacitance range 33 ~ 15,000 μF

Capacitance tolerance ±20%
(At 20°C, 120 Hz)

Max. ripple current See standard operating table
(At 85°C, 120 Hz)

Leakage current $I \leq 0.01CV$
(At 20°C, after 2 minutes)
I: Leakage Current (μA), C: Nominal capacitance (μF).
V: Rated voltage (VDC)

Tangent of loss angle Shall not exceed the following value.
 $\tan \delta$ (At 20°C, 120 Hz)

CAP. \ R.V.(VDC)	6.3	10	16	25	35	50
1000μF or less	0.35	0.30	0.25	0.20	0.15	0.12
More than 1000μF	Add .02 to above value for every 1000μF or less.					

Impedance ratio at low temperature
(At 120 Hz)

Shall not exceed the following value.

RV (VDC)	6.3	10	16	25	35 ~ 50
-25°C/20°C	4	3	2	2	2
-40°C/20°C	10	8	6	4	3

Life test

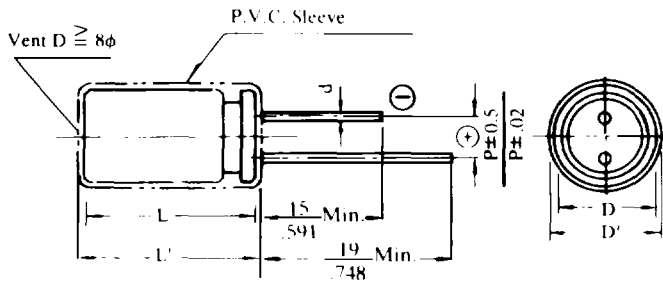
At 85°C ±2°C for a period of 2,000 hours with rated voltage.

Capacitance change	≤ ±20% of initial value
Leakage current	Same as specified value in this table or less
Tan δ	200% or less of the value in this table

Standard

JIS C 5141(1982) characteristic W

● Dimensions



DIMENSION Unit = $\frac{\text{mm}}{\text{inch}}$

Dφ	5	6.3	8	10	13	16	18
	.197	.248	.315	.394	.512	.630	.709
P	2.0	2.5	3.5	5.0	5.0	7.5	7.5
	.079	.098	.138	.197	.197	.295	.295
dφ	0.5	0.5	0.6	0.6	0.6	0.8	0.8
	.020	.020	.024	.024	.024	.031	.031
AWG	24	24	23	23	23	20	20

• mm $L \leq 16$: $L' = (L + 1.0)$ Max
 $L > 16$: $L' = (L + 2.0)$ Max
 $D' = (D + 0.5)$ Max

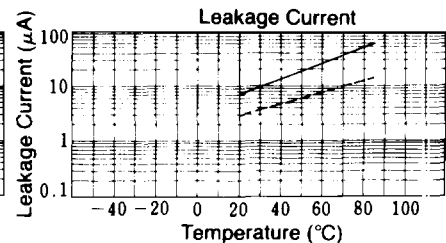
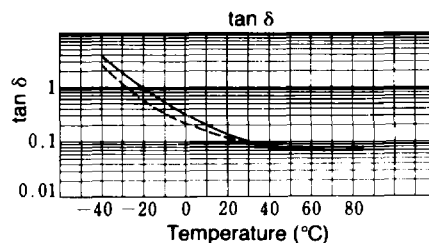
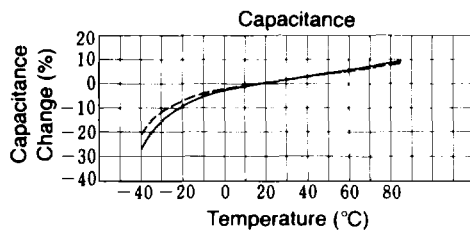
• Inches $L \leq .630$: $L' = (L + .039)$ Max
 $L > .630$: $L' = (L + .079)$ Max
 $D' = (D + .020)$ Max

Part No.	Rated Voltage (VDC)	Capacitance (uF)	Maximum Leakage Current (uA)	Max. E.S.R (Ω) @ 120Hz, 20°C	Maximum Ripple Current (mA) @ 120Hz, 85°C	Nominal Case Size	
						D x L (mm)	D x L (inches)
CEDSM0J221M	6.3	220	13.9	2.64	130	5 x 11	.197 x .433
CEDSM0J331M	6.3	330	20.8	1.76	170	6.3 x 11	.248 x .433
CEDSM0J471M	6.3	470	29.6	1.23	220	6.3 x 11	.248 x .433
CEDSM0J681M	6.3	680	42.8	0.853	290	8 x 11.5	.315 x .453
CEDSM0J102M	6.3	1000	63.0	0.580	380	8 x 11.5	.315 x .453
CEDSM0J152M	6.3	1500	94.5	0.409	510	10 x 16	.394 x .630
CEDSM0J222M	6.3	2200	139	0.294	680	10 x 20	.394 x .787
CEDSM0J332M	6.3	3300	208	0.206	860	10 x 20	.394 x .787
CEDSM0J472M	6.3	4700	296	0.159	1020	13 x 25	.512 x .984
CEDSM0J682M	6.3	6800	428	0.115	1160	13 x 25	.512 x .984
CEDSM0J103M	6.3	10000	630	0.0879	1310	16 x 25	.630 x .984
CEDSM0J153M	6.3	15000	945	0.0696	1530	16 x 35.5	.630 x 1.40
CEDSM1A151M	10	150	15.0	3.32	110	5 x 11	.197 x .433
CEDSM1A221M	10	220	22.0	2.26	140	5 x 11	.197 x .433
CEDSM1A331M	10	330	33.0	1.51	190	6.3 x 11	.248 x .433
CEDSM1A471M	10	470	47.0	1.06	240	6.3 x 11	.248 x .433
CEDSM1A681M	10	680	68.0	0.731	340	8 x 11.5	.315 x .453
CEDSM1A102M	10	1000	100	0.497	430	10 x 12.5	.394 x .492
CEDSM1A152M	10	1500	150	0.354	560	10 x 16	.394 x .630
CEDSM1A222M	10	2200	220	0.256	730	10 x 20	.394 x .787
CEDSM1A332M	10	3300	330	0.181	940	13 x 20	.512 x .787
CEDSM1A472M	10	4700	470	0.134	1100	13 x 25	.512 x .984
CEDSM1A682M	10	6800	680	0.102	1260	16 x 25	.630 x .984
CEDSM1A103M	10	10000	1000	0.0796	1440	16 x 35.5	.630 x 1.40
CEDSM1A153M	10	15000	1500	0.0641	1650	18 x 35.5	.709 x 1.40
CEDSM1C101M	16	100	16.0	4.14	100	5 x 11	.197 x .433
CEDSM1C151M	16	150	24.0	2.76	140	6.3 x 11	.248 x .433
CEDSM1C221M	16	220	35.2	1.88	180	6.3 x 11	.248 x .433
CEDSM1C331M	16	330	52.8	1.26	240	8 x 11.5	.315 x .453
CEDSM1C471M	16	470	75.2	0.882	310	8 x 11.5	.315 x .453
CEDSM1C681M	16	680	108	0.610	400	10 x 12.5	.394 x .492
CEDSM1C102M	16	1000	160	0.414	510	10 x 16	.394 x .630
CEDSM1C152M	16	1500	240	0.298	670	10 x 20	.394 x .787
CEDSM1C222M	16	2200	352	0.219	870	13 x 20	.512 x .787
CEDSM1C332M	16	3300	528	0.156	1080	13 x 25	.512 x .984
CEDSM1C472M	16	4700	752	0.116	1220	16 x 25	.630 x .984
CEDSM1C682M	16	6800	1088	0.0902	1440	16 x 35.5	.630 x 1.40
CEDSM1C103M	16	10000	1600	0.0713	1530	18 x 35.5	.709 x 1.40
CEDSM1E680M	25	68	17.0	4.88	92	5 x 11	.197 x .433
CEDSM1E101M	25	100	25.0	3.32	120	6.3 x 11	.248 x .433
CEDSM1E151M	25	150	37.5	2.21	160	6.3 x 11	.248 x .433
CEDSM1E221M	25	220	55.0	1.51	210	8 x 11.5	.315 x .453
CEDSM1E331M	25	330	82.5	1.00	280	8 x 11.5	.315 x .453
CEDSM1E471M	25	470	118	0.705	360	10 x 12.5	.394 x .492

Part No.	Rated Voltage (VDC)	Capacitance (uF)	Maximum Leakage Current (uA)	Max. E.S.R (Ω) @ 120Hz, 20°C	Maximum Ripple Current (mA) @ 120Hz, 85°C	Nominal Case Size	
						D x L (mm)	D x L (inches)
CEDSM1E681M	25	680	170	0.488	470	10 x 16	.394 x .630
CEDSM1E102M	25	1000	250	0.332	610	10 x 20	.394 x .787
CEDSM1E152M	25	1500	375	0.243	780	13 x 20	.512 x .787
CEDSM1E222M	25	2200	550	0.181	990	13 x 25	.512 x .984
CEDSM1E332M	25	3300	825	0.131	1200	16 x 25	.630 x .984
CEDSM1E472M	25	4700	1175	0.0988	1400	16 x 31.5	.630 x 1.24
CEDSM1E682M	25	6800	1700	0.0780	1550	18 x 35.5	.709 x 1.40
CEDSM1V470M	35	47	16.5	5.29	82	5 x 11	.197 x .433
CEDSM1V680M	35	68	23.8	3.66	105	6.3 x 11	.248 x .433
CEDSM1V101M	35	100	35.0	2.49	135	6.3 x 11	.248 x .433
CEDSM1V151M	35	150	52.5	1.66	180	8 x 11.5	.315 x .453
CEDSM1V221M	35	220	77.0	1.13	240	8 x 11.5	.315 x .453
CEDSM1V331M	35	330	116	0.754	320	10 x 12.5	.394 x .492
CEDSM1V471M	35	470	165	0.529	420	10 x 16	.394 x .630
CEDSM1V681M	35	680	238	0.366	540	10 x 20	.394 x .787
CEDSM1V102M	35	1000	350	0.249	710	13 x 20	.512 x .787
CEDSM1V152M	35	1500	525	0.188	890	13 x 25	.512 x .984
CEDSM1V222M	35	2200	770	0.143	1100	16 x 25	.630 x .984
CEDSM1V332M	35	3300	1155	0.106	1310	16 x 35.5	.630 x 1.40
CEDSM1V472M	35	4700	1645	0.0811	1600	18 x 35.5	.709 x 1.40
CEDSM1H330M	50	33	16.5	6.03	73	5 x 11	.197 x .433
CEDSM1H470M	50	47	23.5	4.23	90	6.3 x 11	.248 x .433
CEDSM1H680M	50	68	34.0	2.93	117	6.3 x 11	.248 x .433
CEDSM1H101M	50	100	50.0	2.00	155	8 x 11.5	.315 x .453
CEDSM1H151M	50	150	75.0	1.33	215	10 x 12.5	.394 x .492
CEDSM1H221M	50	220	110	0.904	290	10 x 12.5	.394 x .492
CEDSM1H331M	50	330	165	0.603	380	10 x 16	.394 x .630
CEDSM1H471M	50	470	235	0.423	510	10 x 20	.394 x .787
CEDSM1H681M	50	680	340	0.293	650	13 x 20	.512 x .787
CEDSM1H102M	50	1000	500	0.200	820	13 x 25	.512 x .984
CEDSM1H152M	50	1500	750	0.155	1000	16 x 31.5	.630 x 1.24
CEDSM1H222M	50	2200	1100	0.121	1230	16 x 35.5	.630 x 1.40
CEDSM1H332M	50	3300	1650	0.0904	1420	18 x 35.5	.709 x 1.40

● Technical Data

— 10V - 1,000 μ F
 - - - 16V - 2,200 μ F



● Life Characteristics

- 10 V — 1000 μ F
- - - 16 V 2200 μ F

