

CSD01 SERIES ELECTRIC DOUBLE-LAYER CAPACITOR

CSD01 SERIES ELECTRIC DOUBLE-LAYER CAPACITOR



FEATURES

- Rated voltage of 2.7V
- Capacitance ranging from 0.1F~120F
- Low ESR for high power density
- Long cycle life
- Suitable for quick charge and discharge
- Accept customization

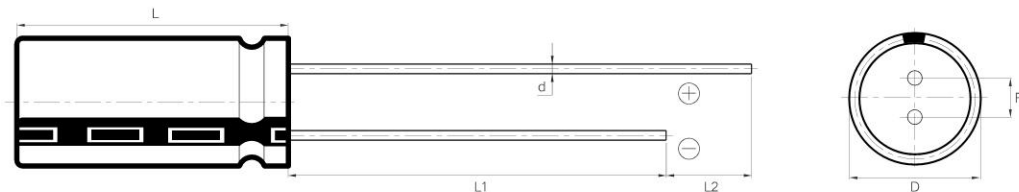
»» APPLICATIONS

Typical applications include hybrid battery packs, UPS & telecom systems, hold up power, high pulse current applications.

»» ORDERING INFORMATION

CSD01	MT	2R7	305	K	C05	Y	T	-M
Series	Temperature characteristics	Rated voltage	Capacitance(μF)	Capacitance tolerance	Size code	Termination finish	Packaging	
CSD01	CP: -25°C~70°C MT: -40°C~70°C	2R7:2.7V 3R0:3.0V	First two digits represent significant figures.Third digit specifies number of zeros. Example: 305=300000μF =3.0F	J= ± 5% K= ± 10% M= ± 20% N= ± 30% V=-20%~+80%		Y=CP wire	T=Bulk	Internal code standard

»» DIMENSIONS



Size code	Unit: mm						Weight(g)
	L	L1	L2	D	F	d	
C02	7.50 ±0.05	≥15	≥4	5.00 ±0.05	1.85 ±0.25	0.45 ±0.05	0.30 ±0.10
C04	12.00 ±0.05	≥15	≥4	8.00 ±0.05	3.00 ±0.25	0.55 ±0.05	0.90 ±0.35
C05	17.00 ±0.05	≥15	≥4	8.00 ±0.05	3.25 ±0.25	0.60 ±0.10	1.35 ±0.30
C06	20.00 ±0.05	≥15	≥4	8.00 ±0.05	3.25 ±0.25	0.60 ±0.10	1.50 ±0.30
C07	20.00 ±0.05	≥15	≥4	10.00 ±0.15	4.75 ±0.25	0.60 ±0.10	2.25 ±0.50
C08	26.00 ±0.05	≥15	≥4	16.00 ±0.25	7.50 ±0.30	0.80 ±0.10	2.20 ±0.50
C09	25.00 ±0.05	≥15	≥4	10.00 ±0.25	5.00 ±0.30	0.60 ±0.10	3.00 ±0.80
C10	30.00 ±0.05	≥15	≥4	10.00 ±0.25	5.00 ±0.30	0.60 ±0.10	3.10 ±0.60
C11	26.00 ±0.05	≥15	≥4	16.00 ±0.25	7.50 ±0.30	0.80 ±0.10	11.0 ±1.50
C12	32.00 ±0.05	≥15	≥4	16.00 ±0.25	7.50 ±0.30	0.80 ±0.10	8.50 ±1.00
C14	42.00 ±0.05	≥15	≥4	18.00 ±0.25	7.50 ±0.30	0.80 ±0.10	13.00 ±1.50
C15	42.00 ±0.05	≥15	≥4	18.00 ±0.25	7.50 ±0.30	0.80 ±0.10	14.00 ±1.80
C16	42.00 ±0.05	≥15	≥4	18.00 ±0.25	7.50 ±0.30	0.80 ±0.10	15.00 ±2.00
C17	43.00 ±0.05	≥15	≥4	22.00 ±0.25	10.00 ±0.30	1.00 ±0.10	17.90 ±2.30
C19	21.00 ±0.05	≥15	≥4	12.50 ±0.15	5.00 ±0.30	0.60 ±0.10	3.50 ±0.80
C20	26.00 ±0.05	≥15	≥4	12.50 ±0.15	5.00 ±0.30	0.60 ±0.10	4.05 ±0.80
C25	25.00 ±0.05	≥15	≥4	8.00 ±0.15	3.50 ±0.25	0.60 ±0.10	2.00 ±0.40
C34	30.00 ±0.05	≥15	≥4	12.50 ±0.15	5.00 ±0.30	0.60 ±0.10	5.20 ±0.80

»» CAPACITANCE AND RATED VOLTAGE RANGE

2.7V Part NO.	Capacitance(F)	Capacitance tolerance	Temperature characteristics	Rated voltage(V)	Surge voltage(V)
CSD01□□2R7104□C02YT-M	0.1	M, N, V	CP, MT	2.7	2.85
CSD01□□2R7154□C02YT-M	0.15	M, N, V	CP, MT	2.7	2.85
CSD01□□2R7254□C02YT-M	0.25	M, N, V	CP, MT	2.7	2.85
CSD01□□2R7504□C04YT-M	0.5	M, N, V	CP, MT	2.7	2.85
CSD01□□2R7105□C04YT-M	1	M, N, V	CP, MT	2.7	2.85
CSD01□□2R7205□C04YT-M	2	K, M, V	CP, MT	2.7	2.85
CSD01□□2R7305□C05YT-M	3.0	K, M, V	CP, MT	2.7	2.85
CSD01□□2R7335□C06YT-M	3.3	K, M, V	CP, MT	2.7	2.85
CSD01□□2R7505□C07YT-M	5	K, M, V	CP, MT	2.7	2.85
CSD01□□2R7505□C25YT-M	5	K, M, V	CP, MT	2.7	2.85
CSD01□□2R7705□C07YT-M	7	K, M, V	CP, MT	2.7	2.85
CSD01□□2R7805□C09YT-M	8	K, M, V	CP, MT	2.7	2.85
CSD01□□2R7106□C09YT-M	10	K, M, V	CP, MT	2.7	2.85
CSD01□□2R7106□C19YT-M	10	K, M, V	CP, MT	2.7	2.85
CSD01□□2R7106□C10YT-M	10	K, M, V	CP, MT	2.7	2.85
CSD01□□2R7126□C10YT-M	12	K, M, V	CP, MT	2.7	2.85
CSD01□□2R7156□C20YT-M	15	K, M, V	CP, MT	2.7	2.85
CSD01□□2R7206□C20YT-M	20	K, M	CP, MT	2.7	2.85
CSD01□□2R7306□C12YT-M	30	K, M	CP, MT	2.7	2.85
CSD01□□2R7506□C14YT-M	50	K, M	CP, MT	2.7	2.85
CSD01□□2R7606□C15YT-M	60	K, M	CP, MT	2.7	2.85
CSD01□□2R7786□C16YT-M	78	K, M	CP, MT	2.7	2.85
CSD01□□2R7107□C17YT-M	100	M, N	CP, MT	2.7	2.85
CSD01□□2R7127□C17YT-M	120	K, M	CP, MT	2.7	2.85

CSD01 SERIES ELECTRIC DOUBLE-LAYER CAPACITOR

3.0V Part NO.	Capacitance(F)	Capacitance tolerance	Temperature characteristics	Rated voltage(V)	Surge voltage(V)
CSD01□□3R0104□C02YT-M	0.1	M, N, V	CP, MT	3.0	3.15
CSD01□□3R0154□C02YT-M	0.15	M, N, V	CP, MT	3.0	3.15
CSD01□□3R0254□C02YT-M	0.25	M, N, V	CP, MT	3.0	3.15
CSD01□□3R0504□C04YT-M	0.5	M, N, V	CP, MT	3.0	3.15
CSD01□□3R0105□C04YT-M	1	M, N, V	CP, MT	3.0	3.15
CSD01□□3R0205□C04YT-M	2	K, M, V	CP, MT	3.0	3.15
CSD01□□3R0305□C05YT-M	3.0	K, M, V	CP, MT	3.0	3.15
CSD01□□3R0335□C06YT-M	3.3	K, M, V	CP, MT	3.0	3.15
CSD01□□3R0505□C07YT-M	5	K, M, V	CP, MT	3.0	3.15
CSD01□□3R0505□C25YT-M	5	K, M, V	CP, MT	3.0	3.15
CSD01□□3R0705□C07YT-M	7	K, M, V	CP, MT	3.0	3.15
CSD01□□3R0805□C09YT-M	8	K, M, V	CP, MT	3.0	3.15
CSD01□□3R0106□C09YT-M	10	K, M, V	CP, MT	3.0	3.15
CSD01□□3R0106□C10YT-M	10	K, M, V	CP, MT	3.0	3.15
CSD01□□3R0106□C19YT-M	10	K, M, V	CP, MT	3.0	3.15
CSD01□□3R0126□C10YT-M	12	K, M, V	CP, MT	3.0	3.15
CSD01□□3R0156□C20YT-M	15	K, M, V	CP, MT	3.0	3.15
CSD01□□3R0206□C20YT-M	20	K, M	CP, MT	3.0	3.15

CSD01 SERIES ELECTRIC DOUBLE-LAYER CAPACITOR

Rated voltage	Capacitance (F)	Max ESR(mΩ) AC(at 1kHz)	Max ESR(mΩ) DC	Leakage current Max. (μA, 72hr)	Voltage holding characteristics Min. (V, 24hr)	Peak current (A)	sustainable current max (A) ΔT≤15°C
3.0V	0.1	2000	6000	5	2.3	0.094	0.012
	0.15	800	3000	5	2.3	0.155	0.018
	0.25	600	2000	5	2.3	0.250	0.030
	0.5	500	1500	5	2.4	0.429	0.060
	1.0	300	800	6	2.5	0.833	0.120
	2.0	200	600	10	2.5	1.364	0.240
	3.0	100	300	12	2.5	2.368	0.360
	3.3	100	300	12	2.5	2.487	0.396
	5	80	200	15	2.5	3.750	0.600
	7	60	180	20	2.5	4.646	0.840
	8	50	180	20	2.5	4.918	0.960
	10 ^{±10%±25}	60	180	30	2.5	5.357	1.200
	10 ^{±12.5%±25}	45	120	40	2.5	6.818	1.200
	10 ^{±10%±30}	45	120	40	2.5	6.818	1.200
	12	45	120	40	2.5	7.377	1.440
	15	40	80	50	2.5	10.227	1.800
20	35	70	50	2.5	12.500	2.400	

a:The theoretical value of 1s discharge to half voltage is taken as the maximum instantaneous peak current allowed at room temperature

» ELECTRICAL CHARACTERISTICS

Rated voltage	Capacitance (F)	Max ESR(mΩ) AC(at 1kHz)	Max ESR(mΩ) DC	Leakage current Max. (μA, 72hr)	Voltage holding characteristics Min. (V, 24hr)	Peak current (A)	sustainable current max (A) ΔT≤15°C
2.7V	0.1	1500	5000	5	2.1	0.090	0.010
	0.15	600	2500	5	2.1	0.147	0.016
	0.25	400	1800	5	2.1	0.233	0.027
	0.5	300	1000	5	2.2	0.450	0.054
	1	200	600	6	2.3	0.844	0.108
	2	160	400	8	2.3	1.500	0.216
	3.0	80	220	12	2.4	2.440	0.324
	3.3	80	220	12	2.4	2.581	0.356
	5	60	160	15	2.4	3.750	0.540
	7	50	120	20	2.4	5.136	0.756
	8	40	120	20	2.4	5.510	0.864
	10 ^{±10%±25}	50	120	30	2.4	6.136	1.080
	10 ^{±12.5%±25}	40	75	40	2.4	7.714	1.080
	10 ^{±10%±30}	40	75	40	2.4	7.714	1.080
	12	40	75	40	2.4	8.526	1.296
	15	35	60	50	2.4	10.66	1.620
	20	30	45	50	2.4	14.21	2.160
	30	20	40	80	2.4	18.41	3.240
40	20	30	100	2.4	24.55	4.320	
50	15	20	120	2.4	33.75	5.400	
60	15	20	150	2.4	36.82	6.480	
78	15	20	200	2.4	41.13	8.424	
100	15	20	250	2.4	45.00	10.800	
120	15	20	300	2.4	47.65	12.960	

a:The theoretical value of 1s discharge to half voltage is taken as the maximum instantaneous peak current allowed at room temperature

CSD02 SERIES ELECTRIC DOUBLE-LAYER CAPACITOR



FEATURES

- Rated voltage of 2.7V
- Capacitance ranging from 100F to 600F
- Low ESR for high power density
- Suitable for quick charge and discharge
- Accept customization

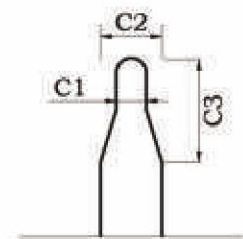
» APPLICATIONS

Typical applications include hybrid battery packs, UPS & telecom systems, hold up power, high pulse current applications.

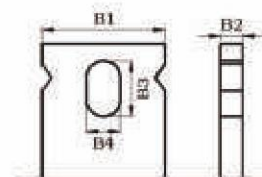
» ORDERING INFORMATION

CSD02	MT	2R7	457	K	M08	W	T	-M
Series	Temperature characteristics	Rated voltage	Capacitance(μF)	Capacitance tolerance	Size code	Wire Form	Packaging	
CSD02	CP: -25°C~70°C MT: -40°C~70°C	2R7:2.7V	First two digits represent significant figures.Third digit specifies number of zeros. Example: 305=300000μF =3.0F	K= ± 10% M= ± 20%		Form S Form L Form W Form T	T=Bulk	Internal code standard

» DIMENSIONS



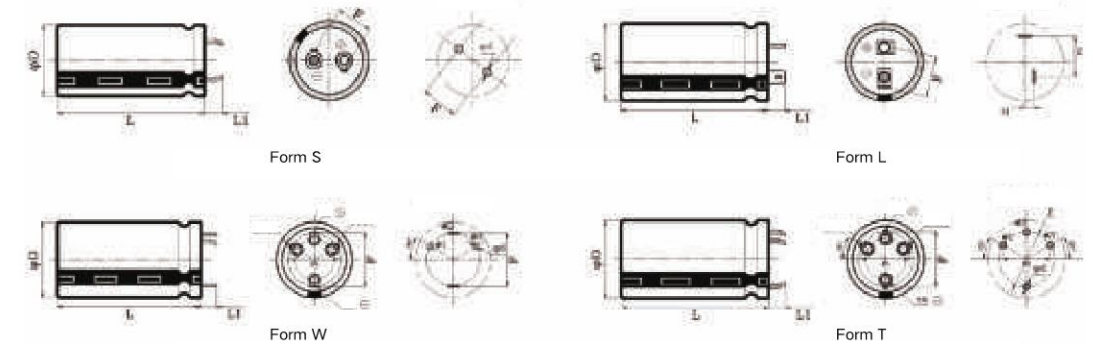
Pin type



Chip type

Pin type Size code			Chip Size code			
C1	C2	C3	B1	B2	B3	B4
1.00 ^{+0.05} / _{-0.05}	1.60±0.10	2.00±0.20	5.20±0.20	1.00±0.10	2.20±0.20	1.50±0.20

CSD02 SERIES ELECTRIC DOUBLE-LAYER CAPACITOR



Size code	M01	M02	M03	M04	M05	M06	M07	M08	M09	M10	
Unit: mm	D	22.0±1.5	22.0±1.5	25.0±1.5	30.0±1.5	30.0±1.5	35±1.5	35.0±1.5	35.0±1.5	35.0±1.5	
	L	45.0±2.0	50.0±2.0	50.0±2.0	50.0±2.0	55.0±2.0	62.0±2.0	66.0±2.0	68.0±2.0	71.0±2.0	
	L1	6.5±1.0	6.5±1.0	6.5±1.0	6.5±1.0	6.5±1.0	6.0±1.0	6.0±1.0	6.0±1.0	6.0±1.0	
	F	10.0±2.0	10.0±2.0	10.0±2.0	10.0±2.0	10.0±2.0	20.0 ^{+1.5} / _{-1.0}	20.0 ^{+1.5} / _{-1.0}	20.0 ^{+1.5} / _{-1.0}	20.0 ^{+1.5} / _{-1.0}	20.0 ^{+1.5} / _{-1.0}
	F1	14.2±2.0	14.2±2.0	14.2±2.0	14.2±2.0	14.2±2.0	20.0±1.0	20.0±1.0	20.0±1.0	20.0±1.0	20.0±1.0
	F2	4.2±0.5	4.2±0.5	4.2±0.5	4.2±0.5	4.2±0.5					
	d	2.0±0.2	2.0±0.2	2.0±0.2	2.0±0.2	2.0±0.2	2.0±0.2	2.0±0.2	2.0±0.2	2.0±0.2	2.0±0.2
Weight(g)	21.5±2.0	23.0±2.0	35.0±2.0	44.5±3.0	46.0±3.0	76.0±5.0	85.0±5.0	85.0±5.0	86.5±5.0	96.0±6.0	

» CAPACITANCE AND RATED VOLTAGE RANGE

Part NO.	Capacitance(F)	Capacitance tolerance	Temperature characteristics	Outlet form	Rated voltage(V)	Surge voltage(V)
CSD02□□2R7107□M01□-M	100	K, M	CP, MT	S, L	2.7	2.85
CSD02□□2R7127□M02□-M	120	K, M	CP, MT	S, L	2.7	2.85
CSD02□□2R7157□M03□-M	150	K, M	CP, MT	S, L	2.7	2.85
CSD02□□2R7207□M04□-M	200	K, M	CP, MT	S, L	2.7	2.85
CSD02□□2R7257□M05□-M	250	K, M	CP, MT	S, L	2.7	2.85
CSD02□□2R7367□M06□-M	360	K, M	CP, MT	W, T	2.7	2.85
CSD02□□2R7407□M07□-M	400	K, M	CP, MT	W, T	2.7	2.85
CSD02□□2R7457□M08□-M	450	K, M	CP, MT	W, T	2.7	2.85
CSD02□□2R7507□M09□-M	500	K, M	CP, MT	W, T	2.7	2.85
CSD02□□2R7607□M10□-M	600	K, M	CP, MT	W, T	2.7	2.85

» ELECTRICAL CHARACTERISTICS

Capacitance (F)	Max ESR(mΩ) AC(at 1kHz)	Max ESR(mΩ) DC	Leakage current Max. (μA, 72hr)	Voltage holding characteristics Min. (V, 24hr)	Peak current (A)	sustainable current max (A) ΔT≤15°C
100	8.0	12.0	0.260	2.4	61.36	10.80
120	8.0	12.0	0.300	2.4	66.39	12.96
150	7.0	10.0	0.500	2.4	81.00	16.20
200	6.0	8.0	0.600	2.4	107.61	21.60
250	6.0	8.0	0.650	2.4	112.50	27.00
360	3.0	3.5	0.950	2.4	215.04	38.88
400	3.0	3.5	1.000	2.4	225.00	43.20
450	3.0	3.5	1.000	2.4	274.27	48.60
500	2.0	2.7	1.000	2.4	287.23	54.00
600	1.8	2.5	1.300	2.4	324.00	64.80

a:The theoretical value of 1s discharge to half voltage is taken as the maximum instantaneous peak current allowed at room temperature

CSD03 SERIES ELECTRIC DOUBLE-LAYER CAPACITOR



FEATURES

- Rated voltage of 2.7V
- Capacitance ranging from 650F to 3000F
- Large capacitance for high energy density
- Low ESR for high power density
- Long cycle life
- Suitable for quick charge and discharge

»» APPLICATIONS

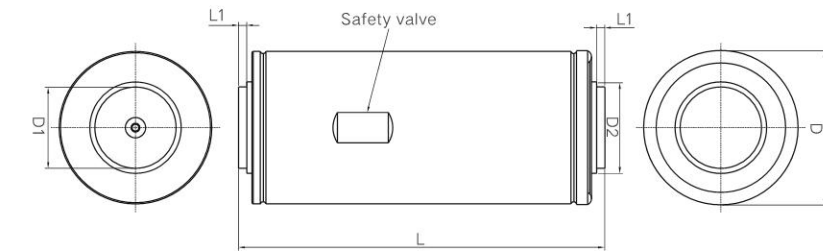
Typical applications include wind turbine pitch control, energy regeneration and motor start in escalators, hybrid vehicles, rail, UPS & telecom systems.

»» ORDERING INFORMATION

Series	Temperature characteristics	Rated voltage	Capacitance (μF)	Capacitance tolerance	Size code	Termination finish	Packaging
CSD03	MT: -40°C~70°C LT: -50°C~70°C (C _R <2F) -55°C~70°C (C _R ≥2F)	2R7=2.7V	First two digits represent significant figures. Third digit specifies number of zeros. Example: 308=3000000000μF=3000F	J=±5% K=±10% M=±20%	Refer to dimensions	X= Aluminium	E= Grid packing

CSD03 SERIES ELECTRIC DOUBLE-LAYER CAPACITOR

»» DIMENSIONS



Unit:mm

Size code	L	L1	D	D1	D2	Weight(g)
C50	57.5±0.5	3.0±0.05	60.0±0.5	32.0±0.5	36.0±0.5	160±5
C51	80.0±0.5	3.0±0.05	60.0±0.5	32.0±0.5	36.0±0.5	260±5
C52	91.0±0.5	3.0±0.05	60.0±0.5	32.0±0.5	36.0±0.5	280±10
C53	108.0±0.5	3.0±0.05	60.0±0.5	32.0±0.5	36.0±0.5	360±10
C54	144.0±0.5	3.0±0.05	60.0±0.5	32.0±0.5	36.0±0.5	510±10

»» CAPACITANCE AND RATED VOLTAGE RANGE

P/N	Capacitance(F)	Capacitance tolerance	Temperature characteristics	Rated voltage(V)	Surge voltage(V)
CSD03□□2R7657□C50XE	650	J, K, M	CP, MT, LT	2.7	2.85
CSD03□□2R7128□C51XE	1200	J, K, M	CP, MT, LT	2.7	2.85
CSD03□□2R7158□C52XE	1500	J, K, M	CP, MT, LT	2.7	2.85
CSD03□□2R7208□C53XE	2000	J, K, M	CP, MT, LT	2.7	2.85
CSD03□□2R7308□C54XE	3000	J, K, M	CP, MT, LT	2.7	2.85

Capacitance tolerance: J, K, M
Temperature characteristics: CP, MT, LT

»» ELECTRICAL CHARACTERISTICS

Capacitance (F)	Max ESR(mΩ)		Leakage current Max. (μA, 72hr)	Voltage holding characteristics Min.(V, 24hr)	Peak current (A)
	AC(at 1kHz)	DC			
650	0.75	0.80	2	2.5	577.3
1200	0.55	0.58	3	2.5	955.2
1500	0.45	0.47	4	2.5	1187
2000	0.33	0.35	4.5	2.5	1588
3000	0.22	0.25	5.5	2.5	2165

CSD05 SERIES ELECTRIC DOUBLE-LAYER CAPACITOR



FEATURES

- Rated voltage of 2.7V
- Small and slim case
- Low ESR for high power density
- Long cycle life
- Suitable for quick charge and discharge

»» APPLICATIONS

Typical applications include backup, hold up power, energy storage, high pulse current applications.

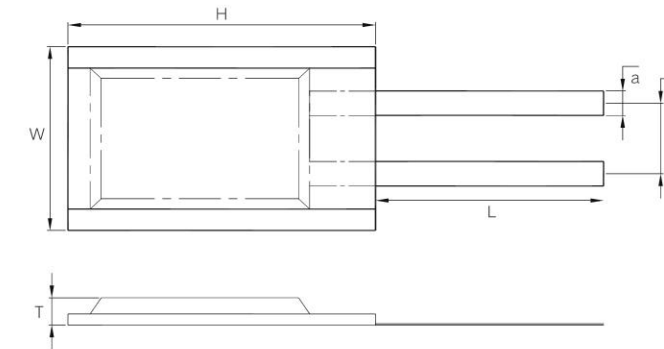
»» ORDERING INFORMATION

Series	Temperature characteristics	Rated voltage	Capacitance (μF)	Capacitance tolerance	Size code	Termination finish	Packaging
CSD05	CP: -25°C~70°C MT: -40°C~70°C LT: -50°C~70°C(C _R <2F) -55°C~70°C(C _R ≥2F)	2R7=2.7V	First two digits represent significant figures. Third digit specifies number of zeros. Example: 145 =1400000μF =1.4F	K=±10% M=±20%	Refer to dimensions	X= Aluminium	E=waffle

CSD05 SERIES ELECTRIC DOUBLE-LAYER CAPACITOR

»» DIMENSIONS

Unit:mm



Size code	W	H	T	L	F	a	Weight(g)
P01	14.7±0.3	22.7±0.3	1.9±0.2	15±3	5.3±0.3	2.0±0.1	0.57±0.05

»» CAPACITANCE AND RATED VOLTAGE RANGE

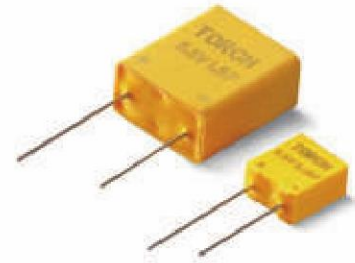
P/N	Capacitance(F)	Capacitance tolerance	Temperature characteristics	Rated voltage(V)	Surge voltage(V)
CSD05□□2R7145□P01WF	1.4	K, M	CP, MT, LT	2.7	2.85

Capacitance tolerance: K, M
Temperature characteristics: CP, MT, LT

»» ELECTRICAL CHARACTERISTICS

Capacitance (F)	Max ESR(mΩ)		Leakage current Max. (μA, 72hr)	Voltage holding characteristics Min.(V, 24hr)	Peak current (A)
	AC(at 1kHz)	DC			
1.4	60	220	8	2.3	1.4

CSM01-A SERIES ELECTRIC DOUBLE-LAYER CAPACITOR



FEATURES

- Operating temperature rang of -40°C to +70°C
- Store more energy
- Low ESR for high power density
- Long cycle life
- Accept customization

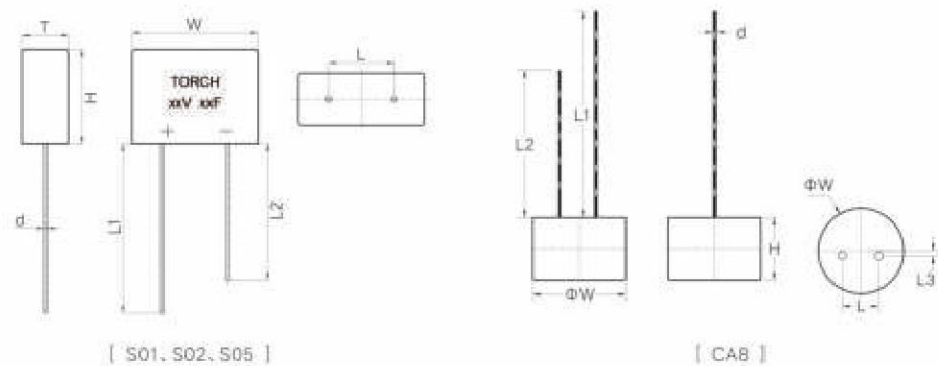
»» APPLICATIONS

be used as pulse power output power supply, starting power supply, emergency backup power supply and UTC power supply.

»» ORDERING INFORMATION

CSM01	RP	5R5	104	M	S02	Y	F	-M
Series	characteristics	Rated voltage	Capacitance(μF)	Capacitance tolerance	Size code	Wire Form	Packaging	
CSM01-A	RP	5R5:5.5V 8R1:8.1V	First two digits represent significant figures.Third digit specifies number of zeros. Example: 305=3000000μF =3.0F	K= ± 10% M= ± 20% Q=-20%~+50%		Form Y	F=Waffle	Internal code standard

»» DIMENSIONS



CSM01-A SERIES ELECTRIC DOUBLE-LAYER CAPACITOR

Size code	Unit: mm						
	L	L1	L2	W	H	T/L3	Weight(g)
S01	7.5±0.3	24.5±1.0	20±1.0	12.0±0.3	13.5±0.3	6.6±0.3	0.5±0.05
S02	7.0±0.5	22±2.0	18±2.0	13.0±0.3	12.5±0.3	6.3±0.3	0.4±0.1
S05	12.0±0.5	23±2.0	18±2.0	18.5±0.3	21±0.3	10±0.5	0.6±0.05
CA8	5.0±0.3	24±2.0	19±2.0	12.0±0.3	9.3±0.3	0.6±0.2	0.4±0.1

»» CAPACITANCE AND RATED VOLTAGE RANGE

Part NO.	Capacitance(F)	Capacitance tolerance	Rated voltage(V)	Surge voltage(V)	Weight(g)
CSM01RP5R5473□CA8YF-M	0.047	K, M, Q	5.5	5.7	1.8±0.3
CSM01RP5R5104□S01YF-M	0.1	K, M, Q	5.5	5.7	1.5±0.3
CSM01RP5R5104□S02YF-M	0.1	K, M, Q	5.5	5.7	1.4±0.3
CSM01RP5R5155□S05YF-M	1.5	K, M	5.5	5.7	5.2±0.5
CSM01RP8R1473□CA8YF-M	0.047	K, M, Q	8.1	8.5	1.8±0.5
CSM01RP8R1603□CA8YF-M	0.06	K, M, Q	8.1	8.5	1.8±0.5

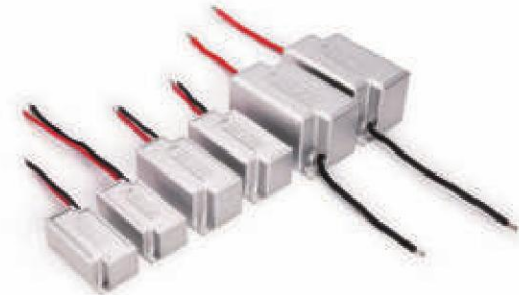
»» ELECTRICAL CHARACTERISTICS

Part NO.	Rated voltage(V)	Capacitance (F)	Max ESR(mΩ) AC(at 1kHz)	Max ESR(mΩ) DC	Leakage current Max. (μA, 72hr)	Voltage holding characteristics Min. (V, 24hr)	Peak current (A)	sustainable current max (A) ΔT≤15°C
CSM01RP5R5473□CA8YF-M	5.5	0.047	2000	7000	3	4.2	0.11	0.010
CSM01RP5R5104□S01YF-M	5.5	0.1	1500	4000	5	4.0	0.23	0.027
CSM01RP5R5104□S02YF-M	5.5	0.1	800	3800	3	4.2	0.23	0.022
CSM01RP5R5155□S05YF-M	5.5	1.5	200	600	12	4.6	2.44	0.324
CSM01RP8R1473□CA8YF-M	8.1	0.047	2000	6000	3	6.3	0.17	0.015
CSM01RP8R1603□CA8YF-M	8.1	0.06	2000	6000	3	6.3	0.21	0.020

a:The theoretical value of 1s discharge to half voltage is taken as the maximum instantaneous peak current allowed at room temperature

CSM01-B SERIES ELECTRIC DOUBLE-LAYER CAPACITOR

CSM01-B SERIES ELECTRIC DOUBLE-LAYER CAPACITOR



FEATURES

- Operating temperature rang of -40°C to +70°C
- Store more energy
- Low ESR for high power density
- Long cycle life
- Accept customization

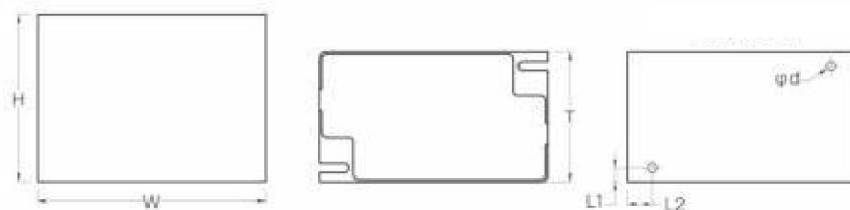
APPLICATIONS

Equipment starting power supply, explosive power supply, instantaneous large current output power supply, intelligent equipment backup power supply, emergency power supply, power supply for emergency storage of power failure data

ORDERING INFORMATION

CSM01	GP	48R	164	M	ST1	W	T	-M
Series	characteristics	Rated voltage	Capacitance(μF)	Capacitance tolerance	Size code	Wire form	Packaging	Internal code standard
CSM01-B	GP	13R:13.5V 16R:16V 32R:32V 48R:48V 51R:51V 65R:65V	First two digits represent significant figures.Third digit specifies number of zeros. Example: 305=3000000μF =3.0F	K= ± 10% M= ± 20% N= ± 30% Q=-20%~+50% V=-20%~+80%		Form W	T=Bulk packing	Internal code standard

DIMENSIONS



Size code	Unit: mm					
	W	T	H	L1	L2	d
ST1	70.2±0.5	36.8±0.5	27±0.5	4.0±0.5	5.7±0.5	4.0±0.2
ST2	84.5±0.5	43.9±0.5	36±0.5	6.5±0.5	8.0±0.5	4.0±0.2
ST3	92.8±0.5	52.2±0.5	42±0.5	6.0±0.5	7.5±0.5	4.0±0.2
ST4	100.8±0.5	58.7±0.5	52±0.5	6.5±0.5	10±0.5	4.0±0.2
ST5	100.8±0.5	58.7±0.5	52±0.5	6.5±0.5	10±0.5	4.0±0.2

CAPACITANCE AND RATED VOLTAGE RANGE

Part NO.	Capacitance(F)	Capacitance tolerance	Rated voltage(V)	Surge voltage(V)	Weight(g)
CSM01GP13R605□ST3WT-M	6	K, M, Q	13.5	14.2	240±20
CSM01GP13R126□ST4WT-M	12	K, M, Q	13.5	14.2	350±30
CSM01GP13R206□ST5WT-M	20	K, M, Q	13.5	14.2	450±30
CSM01GP16R505□ST3WT-M	5	K, M, Q	16	17	250±20
CSM01GP16R106□ST4WT-M	10	K, M, Q	16	17	360±30
CSM01GP16R166□ST5WT-M	16.7	K, M, Q	16	17	460±30
CSM01GP24R335□ST3WT-M	3.3	K, M, Q	24	25.6	260±20
CSM01GP24R665□ST4WT-M	6.6	K, M, Q	24	25.6	380±30
CSM01GP24R116□ST5WT-M	11	K, M, Q	24	25.6	490±30
CSM01GP32R255□ST3WT-M	2.5	K, M, Q	32	34	270±20
CSM01GP32R505□ST4WT-M	5.0	K, M, Q	32	34	390±30
CSM01GP32R835□ST5WT-M	8.3	K, M, Q	32	34	530±30
CSM01GP48R164□ST1WT-M	0.16	K, M, Q	48	51	100±10
CSM01GP48R444□ST2WT-M	0.44	K, M, Q	48	51	170±10
CSM01GP51R164□ST1WT-M	0.16	K, M, Q	51	54	100±10
CSM01GP51R424□ST2WT-M	0.42	K, M, Q	51	54	170±10
CSM01GP65R124□ST1WT-M	0.12	K, M, Q	65	68	100±10
CSM01GP65R334□ST2WT-M	0.33	K, M, Q	65	68	170±10

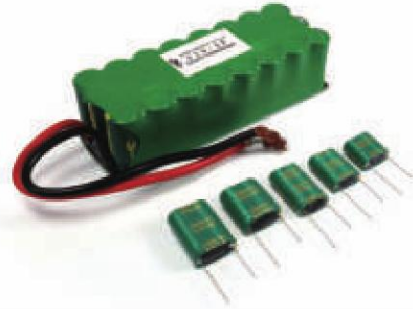
ELECTRICAL CHARACTERISTICS

Part NO.	Capacitance (F)	Rated voltage(V)	Max ESR(mΩ) AC(at 1kHz)	Max ESR(mΩ) DC	Leakage current Max (μA, 72hr)	Voltage holding characteristics Min (V, 24hr)	Peak current (A)	sustainable current max (A) ΔT≤15°C
CSM01GP13R605□ST3WT-M	6	13.5	100	200	80	11.5	18.4	3.24
CSM01GP13R126□ST4WT-M	12	13.5	50	90	150	11.5	38.5	6.48
CSM01GP13R206□ST5WT-M	20	13.5	50	75	250	11.5	54	10.8
CSM01GP16R505□ST3WT-M	5	16	120	240	80	13.8	18.4	3.24
CSM01GP16R106□ST4WT-M	10	16	60	108	150	13.8	38.5	6.48
CSM01GP16R166□ST5WT-M	16.7	16	60	90	250	13.8	54	10.8
CSM01GP24R335□ST3WT-M	3.3	24	180	360	80	20.7	18.4	3.24
CSM01GP24R665□ST4WT-M	6.6	24	90	162	150	20.7	38.5	6.48
CSM01GP24R116□ST5WT-M	11	24	90	135	250	20.7	54	10.8
CSM01GP32R255□ST3WT-M	2.5	32	240	480	80	27.6	18.4	3.24
CSM01GP32R505□ST4WT-M	5.0	32	120	216	150	27.6	38.5	6.48
CSM01GP32R835□ST5WT-M	8.3	32	120	180	250	27.6	54	10.8
CSM01GP48R164□ST1WT-M	0.16	48	1080	3960	12	41.4	2.44	0.32
CSM01GP48R444□ST2WT-M	0.44	48	720	1800	20	41.4	6.0	0.86
CSM01GP51R164□ST1WT-M	0.16	51	1140	4180	12	43.4	2.44	0.32
CSM01GP51R424□ST2WT-M	0.42	51	760	1900	20	43.4	6.0	0.86
CSM01GP65R124□ST1WT-M	0.12	65	1440	5280	12	55.2	2.44	0.32
CSM01GP65R334□ST2WT-M	0.33	65	960	2400	20	55.2	6.0	0.86

a:The theoretical value of 1s discharge to half voltage is taken as the maximum instantaneous peak current allowed at room temperature

CSM01-C SERIES ELECTRIC DOUBLE-LAYER CAPACITOR

CSM01-C SERIES ELECTRIC DOUBLE-LAYER CAPACITOR



FEATURES

- Operating temperature rang of -40°C to +70°C
- Store more energy
- Low ESR for high power density
- Long cycle life
- Accept customization

APPLICATIONS

Typical applications include hybrid battery packs, UPS & telecom systems, hold up power, high pulse current applications.

ORDERING INFORMATION

CSM01	GP	5R5	104	V	TG0	Y	F	-M
Series	characteristics	Rated voltage	Capacitance(μF)	Capacitance tolerance	Size code	Wire Form	Packaging	Internal code standard
CSM01-C	GP RP SC	5R5:5.5V 32R:32V	First two digits represent significant figures.Third digit specifies number of zeros. Example: 305=3000000μF =3.0F	K= ± 10% M= ± 20% N= ± 30% Q=-20%~+50% V=-20%~+80%		Form Y Form W	F=Waffle T=Bulk packing	Internal code standard

CAPACITANCE AND RATED VOLTAGE RANGE

Part NO.	Capacitance tolerance	Capacitance (F)	Rated voltage (V)	Surge voltage (V)	L(mm)	W(mm)	H(mm)	Lead spacing		Weight (g)
								Wire diameter	Wire length	
CSM01GP5R5473□TG0YF-M	M, N, Q, V	0.047	5.5	5.7	10.5±0.5	5.5±0.5	8.5±0.5	7±0.5		0.8±0.1
CSM01GP5R5104□TG0YF-M	K, M, N, Q	0.1	5.5	5.7	10.5±0.5	5.5±0.5	8.5±0.5	7±0.5		0.8±0.1
CSM01GP5R5504□TG0YF-M	K, M, N, Q	0.5	5.5	5.7	16.5±0.5	8.5±0.5	13.8±0.5	12±0.5		2.2±0.3
CSM01GP5R5105□TG0YF-M	K, M, N	1	5.5	5.7	16.5±0.5	8.5±0.5	13.8±0.5	12±0.5		2.2±0.3
CSM01GP5R5155□TG0YF-M	K, M, N	1.5	5.5	5.7	16.5±0.5	8.5±0.5	18.8±0.5	12±0.5		4.0±0.3
CSM01GP5R5505□TG0YF-M	K, M, N, Q	5	5.5	5.7	20.5±0.5	10.5±0.5	27.5±0.5	15.5±0.5		6.2±0.5
CSM01GP5R5755□TG0YT-M	K, M, N, Q	7.5	5.5	5.7	25.5±0.5	13±0.5	27.5±0.5	18.0±0.5		10±0.5
CSM01GP5R5106□TG0YT-M	K, M, N, Q	10	5.5	5.7	25.5±0.5	13±0.5	27.5±0.5	18.0±0.5		10±0.5
CSM01GP5R5156□TG0YT-M	K, M, N, Q	15	5.5	5.7	32.5±0.5	16.5±0.5	34.5±0.5	23.2±0.5		18.5±0.5
CSM01GP8R1504□TG0YF-M	K, M, N, Q	0.5	8.1	8.5	24.5±0.5	8.5±0.5	13.8±0.5	13.5±0.5		3.0±0.3
CSM01GP8R105□TG0YF-M	K, M, N, Q	1	8.1	8.5	24.5±0.5	8.5±0.5	18.8±0.5	13.5±0.5		5.0±0.3
CSM01SC13R126□TG0WT-M	K, M, N	12	13.5	14.2	97±0.5	19±0.5	44.5±0.5	Wire diameter: 3.5±0.3 Wire length: 150±5		88±10
CSM01GP13R206□TG0WT-M	K, M, N	20	13.5	14.2	97±0.5	19±0.5	66±0.5	Wire diameter: 3.5±0.3 Wire length: 150±5		120±10
CSM01GP16R106□TG0WT-M	K, M, N	10	16	17	115±0.5	19±0.5	44.5±0.5	Wire diameter: 3.5±0.3 Wire length: 150±5		95±10
CSM01GP16R166□TG0WT-M	K, M, N	16	16	17	115±0.5	19±0.5	66±0.5	Wire diameter: 3.5±0.3 Wire length: 150±5		140±10
CSM01GP32R506□TG0WT-M	K, M, N	5	32	34.2	132±1	49±1	35±1	Wire diameter: 4.5±0.3 Wire length: 150±5		262±10

ELECTRICAL CHARACTERISTICS

Part NO.	Capacitance (F)	Rated voltage(V)	Max ESR(mΩ) AC(at 1kHz)	Max ESR(mΩ) DC	Leakage current Max. (μA, 72hr)	Voltage holding characteristics Min. (V, 24hr)	Peak current (A)	sustainable current max (A) ΔT≤15°C
CSM01GP5R5473□TG0YF-M	0.047	5.5	2000	7000	3	4.2	0.11	0.010
CSM01GP5R5104□TG0YF-M	0.1	5.5	800	3800	3	4.2	0.23	0.022
CSM01GP5R5504□TG0YF-M	0.5	5.5	500	1500	6	4.5	0.78	0.110
CSM01GP5R5105□TG0YF-M	1	5.5	350	700	10	4.5	1.57	0.220
CSM01GP5R5155□TG0YF-M	1.5	5.5	200	600	12	4.6	2.44	0.324
CSM01GP5R5505□TG0YF-M	5	5.5	140	350	20	4.7	4.33	0.770
CSM01GP5R5755□TG0YT-M	7.5	5.5	100	300	30	4.8	5.50	1.10
CSM01GP5R5106□TG0YT-M	10	5.5	100	200	50	4.8	8.33	1.65
CSM01GP5R5156□TG0YT-M	15	5.5	40	80	80	4.8	18.4	3.24
CSM01GP8R1504□TG0YF-M	0.5	8.1	750	2250	6	6.8	0.78	0.110
CSM01GP8R105□TG0YF-M	1	8.1	300	900	12	4.6	2.44	0.324
CSM01SC13R126□TG0WT-M	12	13.5	100	150	150	11.5	28.96	6.48
CSM01GP13R206□TG0WT-M	20	13.5	80	120	250	11.5	39.7	10.8
CSM01GP16R106□TG0WT-M	10	16	120	180	150	13.8	28.57	6.48
CSM01GP16R166□TG0WT-M	16	16	90	140	250	13.8	40.0	10.8
CSM01GP32R506□TG0WT-M	5	32	170	290	160	27.6	36.82	6.48

a:The theoretical value of 1s discharge to half voltage is taken as the maximum instantaneous peak current allowed at room temperature

CSM02 SERIES ELECTRIC DOUBLE-LAYER CAPACITOR



FEATURES

- Operating temperature rang of -40°C to +70°C
- large capacitance for high energy density
- Internal with high reliable single voltage monitoring chip
- High efficiency single overvoltage protection circuit
- Accept customization

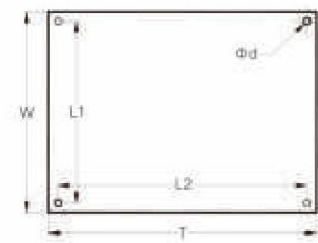
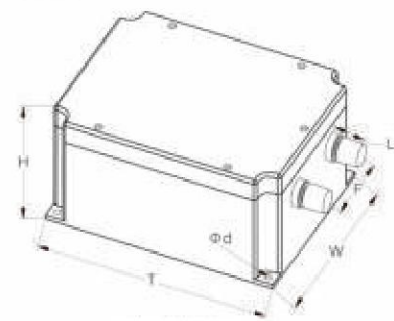
»» APPLICATIONS

Typical applications include hybrid battery packs, UPS & telecom systems, hold up power, high pulse current applications.

»» ORDERING INFORMATION

CSM02	GP	32R	386	M	SK1	Z	T	-M
Series	characteristics	Rated voltage	Capacitance(μF)	Capacitance tolerance	Size code	Wire Form	Packaging	
CSM02	GP	24R:24V 32R:32V	First two digits represent significant figures.Third digit specifies number of zeros. Example: 305=3000000μF =3.0F	K= ± 10% M= ± 20%		Form Z	T=Bulk packing	Internal code standard

DIMENSIONS



Type GP

Size code	Unit: mm								Weight(g)
	W	T	H	F	L	L1	L2	d	
SK1	130.0±3.0	170.0±3.0	80.0±3.0	53.0±1.0	23.0±3.0	118.0±2.0	158.0±2.0	5.0±0.3	2.19±0.2
SK2	130.0±3.0	170.0±3.0	91.0±3.0	53.0±1.0	23.0±3.0	118.0±2.0	158.0±2.0	5.0±0.3	2.65±0.2

CSM02 SERIES ELECTRIC DOUBLE-LAYER CAPACITOR

»» CAPACITANCE AND RATED VOLTAGE RANGE

Part NO.	Capacitance(F)	Capacitance tolerance	Rated voltage(V)	Surge voltage(V)
CSM02GP24R506□SK1ZT-M	50	K, M	24	25.6
CSM02GP24R666□SK2ZT-M	66	K, M	24	25.6
CSM02GP32R386□SK1ZT-M	38	K, M	32	34.2
CSM02GP32R506□SK2ZT-M	50	K, M	32	34.2

»» ELECTRICAL CHARACTERISTICS

Part NO.	Rated voltage(V)	Capacitance (F)	Max ESR(mΩ) AC(at 1kHz)	Max ESR(mΩ) DC	Leakage current Max (μA, 72hr)	Voltage holding characteristics Min. (V, 24hr)	Peak current (A)	sustainable current max (A) ΔT≤15°C
CSM02GP24R506□SK1ZT-M	24	50	18.0	24.3	1.0	20.7	274	13.5
CSM02GP24R666□SK2ZT-M	24	66	16.2	22.5	1.5	20.7	324	18
CSM02GP32R386□SK1ZT-M	32	38	24.0	32.4	1.0	27.6	274	13.5
CSM02GP32R506□SK2ZT-M	32	50	21.6	30.0	1.5	27.6	324	18

a:The theoretical value of 1s discharge to half voltage is taken as the maximum instantaneous peak current allowed at room temperature



FEATURES

- Operating temperature rang of -40°C to +70°C
- large capacitance for high energy density
- Internal with high reliable single voltage monitoring chip
- High efficiency single overvoltage protection circuit
- Structural seal, with a certain waterproof ability
- Accept customization

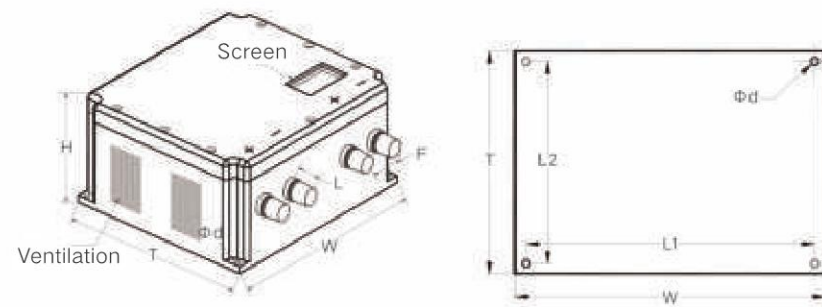
»» APPLICATIONS

Typical applications include hybrid battery packs, UPS & telecom systems, hold up power, high pulse current applications.

»» ORDERING INFORMATION

CSM02	SC	32R	506	M	SL1	Z	T	-M
Series	characteristics	Rated voltage	Capacitance(μF)	Capacitance tolerance	Size code	wire form	Packaging	
CSM02	sc	24R:24V 32R:32V	First two digits represent significant figures.Third digit specifies number of zeros. Example: 305=3000000μF =3.0F	K= ± 10% M= ± 20%		Form Z	T=Bulk packing	Internal code standard

»» DIMENSIONS



Size code (Customization)	Unit: mm								Weight(g)
	W	T	H	F	L	L1	L2	d	
SL1	200,0±3,0	180,0±3,0	90,0±3,0	35,0±1,0	25,0±3,0	19,5±1,0	17,0±1,0	5,0±0,3	3.30±0.1

»» CAPACITANCE AND RATED VOLTAGE RANGE

Part NO.	Capacitance(F)	Capacitance tolerance	Rated voltage(V)	Surge voltage(V)
CSM02SC24R666□SL1ZT-M	66	K, M	24	25.6
CSM02SC32R506□SL1ZT-M	50	K, M	32	34.2

»» ELECTRICAL CHARACTERISTICS

Part NO.	Rated voltage(V)	Capacitance (F)	Max ESR(mΩ) AC(at 1kHz)	Max ESR(mΩ) DC	Leakage current Max. (μA, 72hr)	Voltage holding characteristics Min. (V, 24hr)	Peak current (A)	sustainable current max (A) ΔT≤15°C
CSM02SC24R666□SL1ZT-M	24	66	16.2	22.5	1.5	20.7	324	18
CSM02SC32R506□SL1ZT-M	32	50	21.6	30.0	1.5	27.6	324	18

a:The theoretical value of 1s discharge to half voltage is taken as the maximum instantaneous peak current allowed at room temperature