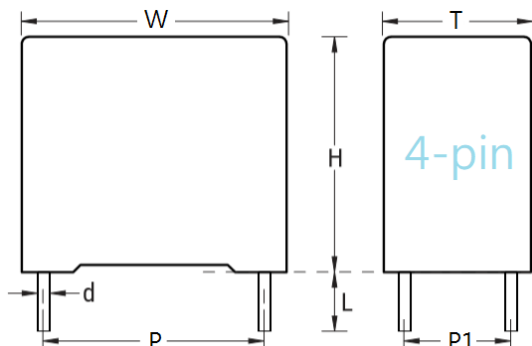


For DC-Link SMC4 series

■ Outline Drawing



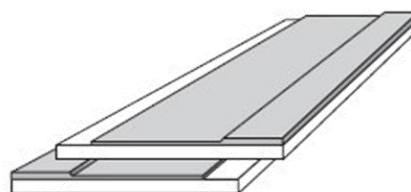
■ Typical Applications

High performance DC filter applications
(Inverter, industrial and high-end power supply, solar inverters, charging piles, etc.)

■ Features

Metalized polypropylene film membrane structure
Good electrical performance
Plastic shell package (UL94v-0), resin filling
Plastic case (UL94V-0), Epoxy resin sealing.

■ Construction



■ Specifications

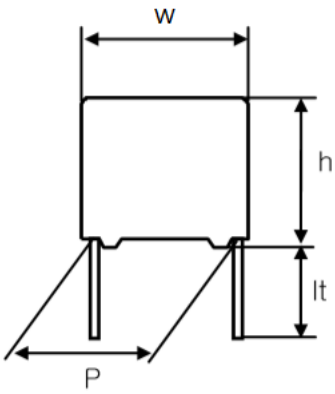
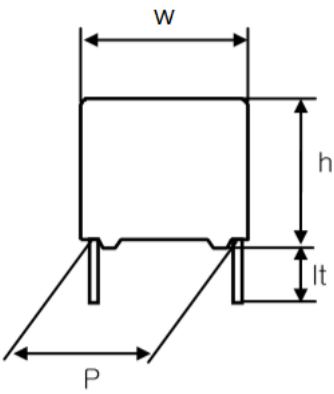
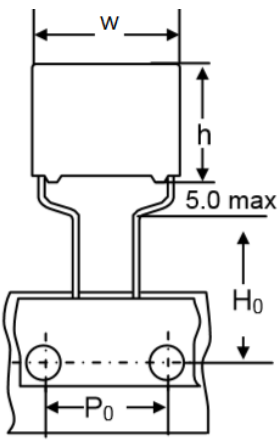
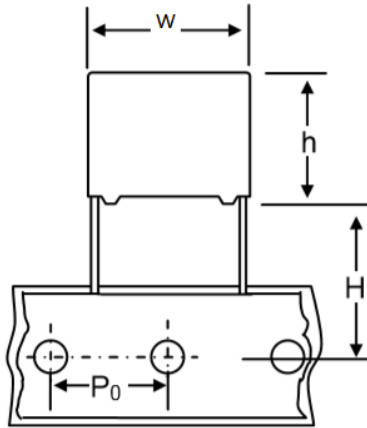
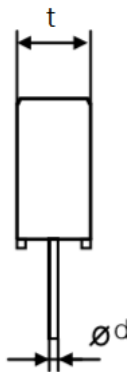
Reference Standard	GB/T 17702 (IEC 61071)						
Climatic Category	40/105/56						
Rated Temperature	85°C						
Operating Temperature Range	-40°C~105°C +85°C to 105°C : Decreasing factor 1.35% per °C for U_N 85°C						
Capacitance Range	1μF ~ 140μF						
Rated (DC) Voltage	500V	600V	800V	900V	1000V	1100V	1200V
Capacitance Tolerance	±5%(J) 、 ±10%(K)						
Voltage Proof	1.5 U_R (10s)						
Insulation Resistance	>1000s (20°C, 100Vdc, 1min)						
Self Inductance (LS)	< 1nH per mm of lead spacing						
Maximum peak current (A)	$\uparrow = C \cdot dv/dt$						
Expedxtd life time	100,000hrs @ U_N , $\theta_{hs} = 70^\circ\text{C}$						

For DC-Link SMC4 series

■ Product code system

SMC4	J	205	K	0800	D	B	10	06
Type	Internal use	Capacitance	Tolerance	Rated Voltage	Voltage	Lead forming	Lead Pitch	Lead Length
SMC4= Metallized Polypropylene Capacitor (Boxed)	--	205 =2000nF =2.0μF	J=±5% K=±10%	0500=500V 0600=600V 0800=800V 0900=900V 1000=1000V 1100=1100V 1200=1200V	D=DC	Shown as Table I	23=22.5mm 28=27.5mm 38=37.5mm 58=57.5mm	06=6.0mm 08=8.0mm

■ Table I

Code	B (Straight 15mm)	K (Short)	U (Vertical Kink)
Lead Forming			
Code	T (Taping)	--	--
Lead Forming			--

For DC-Link SMC4 series

■ Dimensions (mm)

U _N , 85°C : 500Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ * (10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
5.0	32	22	11	27.5	-	0.8	65	10	100	8.5	5
10	32	24.5	15	27.5	-	0.8	65	10	100	7.5	6.5
22	32	37	22	27.5	-	0.8	65	10	100	5	10
30	42	40	20	37.5	10.2	1.0	30	15	150	8	12.5
35	42	36	24	37.5	10.2	1.0	30	15	150	8	13.5
40	41.5	37.5	27.5	37.5	10.2	1.0	30	15	150	5	14.5
50	41	43	28	37.5	12.7	1.2	30	15	150	4	16
50	42	45	30	37.5	20.3	1.2	30	15	150	4	16
60	42	45	30	37.5	20.3	1.2	30	15	150	3	16.5
75	57	43.5	29.5	52.5	12.7	1.2	15	35	350	5.5	16
75	57	43.5	29.5	52.5	20.3	1.2	15	35	350	5.5	16
80	57	43.5	29.5	52.5	20.3	1.2	15	35	350	5	16.5
100	57	50	35	52.5	20.3	1.2	15	35	350	4	18
110	57	50	35	52.5	20.3	1.2	15	35	350	4	19

U _N , 85°C : 600Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ * (10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
2.0	32	18	9	27.5	-	0.8	65	11	100	47.8	2.8
3.0	32	20	11	27.5	-	0.8	65	11	100	31.8	4.1
4.0	32	20	11	27.5	-	0.8	65	11	100	23.9	5.5
5.0	32	22	13	27.5	-	0.8	65	11	100	19.1	6.9
6.0	32	24.5	15	27.5	-	0.8	65	11	100	18.6	7.1
7.0	32	24.5	15	27.5	-	0.8	65	11	100	15.9	8.3
8.0	32	28	14	27.5	-	0.8	65	11	100	13.9	9.5
9.0	32	30	16	27.5	-	0.8	65	11	100	12.4	10.7
10	32	30	16	27.5	-	0.8	65	11	100	11.1	11
12	32	33	18	27.5	-	0.8	65	11	100	10.8	12

For DC-Link SMC4 series

■ Dimensions (mm)

U _N , 85°C : 600Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ * (10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
15	32	37	22	27.5	-	0.8	65	11	100	9	12
15	32	37	22	27.5	10.2	0.8	65	11	100	7.4	16.5
18	32	37	22	27.5	-	0.8	65	11	100	8	12
18	32	37	22	27.5	12.7	0.8	65	11	100	6.2	17
10	41	30	16	37.5	-	1.0	30	20	175	19.5	6.2
12	41	30	16	37.5	-	1.0	30	20	175	16.3	7.4
15	41	33.5	18.5	37.5	-	1.0	30	20	175	13	9.2
20	42	40	20	37.5	10.2	1.0	30	20	175	9.8	12.3
22	42	40	20	37.5	10.2	1.0	30	20	175	8.9	13.5
25	42	40	20	37.5	10.2	1.0	30	20	175	7.8	15.4
30	42	44	24	37.5	12.7	1.0	30	20	175	6.5	18.5
35	42	45	30	37.5	12.7	1.2	30	20	175	6	20.1
35	42	45	30	37.5	20.3	1.2	30	20	175	6	20.1
40	42	45	30	37.5	12.7	1.2	30	20	175	5.2	23
40	42	45	30	37.5	20.3	1.2	30	20	175	5.2	23
45	42	50	35	37.5	12.7	1.2	30	20	175	4.6	25.8
45	42	50	35	37.5	20.3	1.2	30	20	175	4.6	25.8
50	42	50	35	37.5	20.3	1.2	30	20	175	4.2	28.7
55	42	46	35	37.5	20.3	1.2	30	20	175	3.8	31.6
60	42	50	40	37.5	20.3	1.2	30	20	175	3.5	34.5
65	42	55	40	37.5	20.3	1.2	30	20	175	3.2	35
70	42	55	40	37.5	20.3	1.2	30	20	175	3.0	35
75	42	55	45	37.5	20.3	1.2	30	20	175	2.8	35
80	42	60	45	37.5	20.3	1.2	30	20	175	2.6	35
85	42	60	45	37.5	20.3	1.2	30	20	175	2.5	35
40	57	45	25	52.5	12.7	1.2	15	36	350	9.8	12.3
45	57	45	25	52.5	12.7	1.2	15	36	350	8.7	13.8
50	57	45	25	52.5	12.7	1.2	15	36	350	7.8	15.4
55	57	43.5	29.5	52.5	12.7	1.2	15	36	350	7.1	16.9

For DC-Link SMC4 series

■ Dimensions (mm)

U _N , 85°C : 600Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ * (10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
55	57	43.5	29.5	52.5	20.3	1.2	15	36	350	7.1	16.9
60	57	43.5	29.5	52.5	12.7	1.2	15	36	350	6.5	18.5
60	57	43.5	29.5	52.5	20.3	1.2	15	36	350	6.5	18.5
65	57	50	35	52.5	12.7	1.2	15	36	350	6.0	20
65	57	50	35	52.5	20.3	1.2	15	36	350	6.0	20
70	57	50	35	52.5	20.3	1.2	15	36	350	5.6	21.5
75	57	50	35	52.5	20.3	1.2	15	36	350	5.2	23.1
80	57	50	35	52.5	20.3	1.2	15	36	350	4.9	24.6
85	57	55	45	52.5	20.3	1.2	15	36	350	4.8	25.1
90	57	55	45	52.5	20.3	1.2	15	36	350	4.6	25.8
95	57	55	45	52.5	20.3	1.2	15	36	350	4.4	27.3
100	57	55	45	52.5	20.3	1.2	15	36	350	4.2	28.7
110	57	55	45	52.5	20.3	1.2	15	36	350	3.8	31.6
120	57	65	45	52.5	20.3	1.2	15	36	350	3.5	34.5
130	57	65	45	52.5	20.3	1.2	15	36	350	3.2	35
140	57	65	45	52.5	20.3	1.2	15	36	350	3.0	35

For DC-Link SMC4 series

■ Dimensions (mm)

U _N , 85°C : 800Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ * (10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
2.0	32	18	9	27.5	-	0.8	65	10	95	45.4	2.9
3.0	32	20	11	27.5	-	0.8	65	10	95	30.3	4.4
3.3	32	30	16	27.5	-	0.8	65	10	95	18.8	7.0
4.0	32	25	13	27.5	-	0.8	65	10	95	22.7	5.8
5.0	32	24.5	15	27.5	-	0.8	65	10	95	18.2	7.3
6.0	32	30	16	27.5	-	0.8	65	10	95	15.1	8.7
7.0	32	30	16	27.5	-	0.8	65	10	95	13.0	10.2
8.0	32	33	18	27.5	-	0.8	65	10	95	12.5	10.5
9.0	32	33	18	27.5	-	0.8	65	10	95	11.1	11.8
10	32	37	22	27.5	-	0.8	65	10	95	11.0	12.0
10	32	37	22	27.5	10.2	0.8	65	10	95	9.1	14.5
11	32	37	22	27.5	-	0.8	65	10	95	10.0	12.0
11	32	37	22	27.5	10.2	0.8	65	10	95	8.3	16.0
12	32	37	22	27.5	-	0.8	65	10	95	9.3	12.0
12	32	37	22	27.5	10.2	0.8	65	10	95	7.6	16.0
13	32	37	22	27.5	-	0.8	65	10	95	8.8	12.0
13	32	37	22	27.5	12.7	0.8	65	10	95	8.1	16.2
14	32	37	22	27.5	-	0.8	65	10	95	8.2	12.0
14	32	37	22	27.5	12.7	0.8	65	10	95	7.6	16.5
8.0	41	30	16	37.5	-	1.0	32	18	160	22.3	5.4
9.0	41	30	16	37.5	-	1.0	30	30	160	19.8	6.1
10	41	33.5	18.5	37.5	-	1.0	30	18	160	17.8	6.7
12	41	33.5	18.5	37.5	-	1.0	30	18	160	14.9	8.1
15	42	40	20	37.5	10.2	1.0	30	18	160	11.9	10.1
20	42	44	24	37.5	12.7	1.0	30	18	160	8.9	13.5
25	42	44	24	37.5	12.7	1.0	30	18	160	7.1	16.8
30	42	45	30	37.5	12.7	1.2	30	18	160	5.9	20.2
30	42	45	30	37.5	20.3	1.2	30	18	160	5.9	20.2
35	42	50	35	37.5	20.3	1.2	30	18	160	5.5	22.0
40	42	50	35	37.5	20.3	1.2	30	18	160	4.8	25.1

For DC-Link SMC4 series

■ Dimensions (mm)

U _N , 85°C : 800Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ *(10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
45	42	55	40	37.5	20.3	1.2	30	18	160	4.2	28.3
50	42	55	40	37.5	20.3	1.2	30	18	160	3.8	31.4
55	42	60	45	37.5	20.3	1.2	30	18	160	3.5	34.5
25	57	45	25	52.5	12.7	1.2	15	33	320	14.3	8.4
30	57	45	25	52.5	12.7	1.2	15	33	320	11.9	10.1
40	57	43.5	29.5	52.5	12.7	1.2	15	33	320	8.9	13.5
40	57	43.5	29.5	52.5	20.3	1.2	15	33	320	8.9	13.5
45	57	43.5	29.5	52.5	12.7	1.2	15	33	320	7.9	15.1
45	57	43.5	29.5	52.5	20.3	1.2	15	33	320	7.9	15.1
50	57	50	35	52.5	12.7	1.2	15	33	320	7.1	16.8
50	57	50	35	52.5	20.3	1.2	15	33	320	7.1	16.8
55	57	50	35	52.5	20.3	1.2	15	33	320	6.5	18.5
60	57	55	35	52.5	20.3	1.2	15	33	320	5.9	20.2
65	57	55	45	52.5	20.3	1.2	15	33	320	5.5	21.9
70	57	55	45	52.5	20.3	1.2	15	33	320	5.1	23.6
75	57	55	45	52.5	20.3	1.2	15	33	320	4.8	25.2
80	57	55	45	52.5	20.3	1.2	15	33	320	4.6	25.9
85	57	55	45	52.5	20.3	1.2	15	33	320	4.5	26.7
90	57	55	45	52.5	20.3	1.2	15	33	320	4.2	28.3
95	57	65	45	52.5	20.3	1.2	15	33	320	4.0	29.8
100	57	65	45	52.5	20.3	1.2	15	33	320	3.8	31.4
110	57	65	45	52.5	20.3	1.2	15	33	320	3.5	34.5

For DC-Link SMC4 series

■ Dimensions (mm)

U _N , 85°C : 900Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ * (10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
1.0	32	18	9	27.5	-	0.8	70	9	90	86	1.5
2.0	32	20	11	27.5	-	0.8	70	9	90	43	3.1
3.0	32	22	13	27.5	-	0.8	70	9	90	28.7	4.6
4.0	32	24.5	15	27.5	-	0.8	70	9	90	21.5	6.1
5.0	32	30	16	27.5	-	0.8	70	9	90	17.2	7.7
6.0	32	33	18	27.5	-	0.8	70	9	90	18	6.9
7.0	32	33	18	27.5	-	0.8	70	9	90	13	10.2
8.0	32	37	22	27.5	-	0.8	70	9	90	11.5	11.4
8.0	32	37	22	27.5	10.2	0.8	70	9	90	10.7	12.3
9.0	32	37	22	27.5	-	0.8	70	9	90	10.4	12.0
9.0	32	37	22	27.5	12.7	0.8	70	9	90	9.6	13.8
10	32	37	22	27.5	-	0.8	70	9	90	12	12.2
10	32	37	22	27.5	12.7	0.8	70	9	90	8.6	15.4
4.7	41	26	15	37.5	-	1.0	35	17	150	35.6	3.4
5.0	41	30	16	37.5	-	1.0	35	17	150	33.4	3.6
6.0	41	30	16	37.5	-	1.0	35	17	150	27.9	4.3
7.0	41	30	16	37.5	-	1.0	35	17	150	23.9	5.0
8.0	41	33	18	37.5	-	1.0	35	17	150	20.9	5.7
10	42	40	20	37.5	10.2	1.0	35	17	150	16.7	7.2
12	41	37	22	37.5	10.2	1.0	35	17	150	13.9	8.6
15	42	44	24	37.5	12.7	1.0	35	17	150	11.1	10.8
18	42	44	24	37.5	12.7	1.0	35	17	150	9.3	12.9
20	42	44	24	37.5	12.7	1.0	35	17	150	8.4	14.4
25	42	45	30	37.5	12.7	1.2	35	17	150	6.7	17.9
25	42	45	30	37.5	20.3	1.2	35	17	150	6.7	17.9
30	42	50	35	37.5	20.3	1.2	35	17	150	5.6	21.5
35	42	55	40	37.5	20.3	1.2	35	17	150	5.1	23.4
40	42	55	40	37.5	20.3	1.2	35	17	150	4.5	26.8
45	42	60	45	37.5	20.3	1.2	35	17	150	4.0	30.1
50	42	60	45	37.5	20.3	1.2	35	17	150	3.6	33.5

For DC-Link SMC4 series

■ Dimensions (mm)

U _N , 85°C : 900Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ * (10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
15	57	45	25	52.5	10.2	1.2	15	31	300	22.3	5.4
20	57	45	25	52.5	12.7	1.2	15	31	300	16.7	7.2
25	57	45	25	52.5	12.7	1.2	15	31	300	13.4	9.0
30	57	43.5	29.5	52.5	12.7	1.2	15	31	300	11.1	10.8
30	57	43.5	29.5	52.5	20.3	1.2	15	31	300	11.1	10.8
35	57	43.5	29.5	52.5	12.7	1.2	15	31	300	9.6	12.6
35	57	50	29.5	52.5	20.3	1.2	15	31	300	9.6	12.6
40	57	50	35	52.5	20.3	1.2	15	31	300	8.4	14.4
45	57	50	35	52.5	20.3	1.2	15	31	300	7.4	16.1
50	57	50	35	52.5	20.3	1.2	15	31	300	6.7	17.9
55	57	55	45	52.5	20.3	1.2	15	31	300	6.1	19.7
60	57	55	45	52.5	20.3	1.2	15	31	300	5.6	21.5
65	57	55	45	52.5	20.3	1.2	15	31	300	5.1	23.3
70	57	65	45	52.5	20.3	1.2	15	31	300	4.8	25.1
75	57	65	45	52.5	20.3	1.2	15	31	300	4.7	25.7
80	57	65	45	52.5	20.3	1.2	15	31	300	4.5	26.8
85	57	65	45	52.5	20.3	1.2	15	31	300	4.2	28.5

For DC-Link SMC4 series

■ Dimensions (mm)

U _N , 85°C : 1000Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ * (10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
1.0	32	18	9	27.5	-	0.8	75	8	80	76.4	1.7
2.0	32	22	13	27.5	-	0.8	75	8	80	38.2	3.5
3.0	32	24.5	15	27.5	-	0.8	75	8	80	25.5	5.2
4.0	32	30	16	27.5	-	0.8	75	8	80	19.1	6.9
5.0	32	33	18	27.5	-	0.8	75	8	80	15.3	8.6
6.0	32	33	18	27.5	-	0.8	75	8	80	14.9	8.9
7.0	32	37	22	27.5	-	0.8	75	8	80	14.5	9.4
7.0	32	37	22	27.5	12.7	0.8	75	8	80	11.4	11.6
8.0	32	37	22	27.5	-	0.8	75	8	80	13.0	10.8
8.0	32	37	22	27.5	12.7	1.0	75	8	80	10.0	13.3
5.0	41	30	16	37.5	-	1.0	37	15	140	31.2	3.8
6.0	41	30	16	37.5	-	1.0	37	15	140	26.0	4.6
7.0	41	33	18	37.5	-	1.0	37	15	140	22.3	5.4
8.0	41	33	18	37.5	-	1.0	37	15	140	19.5	6.2
10	42	40	20	37.5	-	1.0	37	15	140	15.6	6.7
10	42	40	20	37.5	10.2	1.0	37	15	140	15.6	7.7
12	41	37	22	37.5	12.7	1.0	37	15	140	13.0	9.2
12	41	37	22	37.5	-	1.0	37	15	140	15.0	8.0
15	42	44	24	37.5	12.7	1.2	37	15	140	10.4	11.5
18	42	45	30	37.5	12.7	1.2	37	15	140	8.7	13.8
18	42	45	30	37.5	20.3	1.2	37	15	140	8.7	13.8
20	42	45	30	37.5	12.7	1.2	37	15	140	7.8	15.4
20	42	45	30	37.5	20.3	1.2	37	15	140	7.8	15.4
25	42	50	35	37.5	20.3	1.2	37	15	140	6.2	19.2
30	42	55	40	37.5	20.3	1.2	37	15	140	5.2	23.1
35	42	55	40	37.5	20.3	1.2	37	15	140	4.8	25.1
40	42	60	45	37.5	20.3	1.2	37	15	140	4.2	28.7

For DC-Link SMC4 series

■ Dimensions (mm)

U _N , 85°C : 1000Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ * (10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
15	57	45	25	52.5	12.7	1.2	17	28	280	20.8	5.8
20	57	45	25	52.5	12.7	1.2	17	28	280	15.6	7.7
25	57	45	25	52.5	12.7	1.2	17	28	280	12.5	9.6
30	57	43.5	29.5	52.5	12.7	1.2	17	28	280	10.4	11.5
30	57	43.5	29.5	52.5	20.3	1.2	17	28	280	10.4	11.5
30	57	45	30	52.5	12.7	1.2	17	28	280	10.4	11.5
30	57	45	30	52.5	20.3	1.2	17	28	280	10.4	11.5
35	57	50	35	52.5	20.3	1.2	17	28	280	8.9	13.5
40	57	50	35	52.5	20.3	1.2	17	28	280	7.8	15.4
45	57	55	45	52.5	20.3	1.2	17	28	280	6.9	17.3
50	57	55	45	52.5	20.3	1.2	17	28	280	6.2	19.2
55	57	55	45	52.5	20.3	1.2	17	28	280	5.7	21.1
60	57	65	45	52.5	20.3	1.2	17	28	280	5.2	23.1
65	57	65	45	52.5	20.3	1.2	17	28	280	4.8	25.0
70	57	65	45	52.5	20.3	1.2	17	28	280	4.5	26.9

For DC-Link SMC4 series

■ Dimensions (mm)

U _N , 85°C : 1100Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ * (10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
0.68	32	20	11	27.5	-	0.8	80	8	70	80.0	1.7
1.0	32	20	11	27.5	-	0.8	80	8	70	59.4	2.2
1.5	32	22	13	27.5	-	0.8	80	8	70	55.7	2.4
2.0	32	25	13	27.5	-	0.8	80	8	70	27.9	4.7
3.0	32	30	16	27.5	-	0.8	80	8	70	20.4	6.5
4.0	32	33	18	27.5	-	0.8	80	8	70	15.3	8.6
5.0	32	37	22	27.5	-	0.8	80	8	70	14.0	9.8
5.0	32	37	22	27.5	10.2	0.8	80	8	70	12.3	10.8
6.0	32	37	22	27.5	-	0.8	80	8	70	12.3	10.8
6.0	32	37	22	27.5	10.2	0.8	80	8	70	10.2	12.9
3.0	41	30	16	37.5	-	1.0	40	15	130	48.3	2.5
4.0	41	30	16	37.5	-	1.0	40	15	130	36.2	3.3
4.7	41	33.5	18.5	37.5	-	1.0	40	15	130	30.8	3.9
5.0	41	33.5	18.5	37.5	-	1.0	40	15	130	29.0	4.1
6.0	41	33.5	18.5	37.5	-	1.0	40	15	130	24.2	5.0
7.0	42	40	20	37.5	10.2	1.0	40	15	130	20.7	5.8
8.0	41	37	22	37.5	10.2	1.0	40	15	130	18.1	6.6
9.0	41	37	22	37.5	12.7	1.0	40	15	130	16.1	7.5
10	42	44	24	37.5	12.7	1.0	40	15	130	14.5	8.3
12	42	44	24	37.5	12.7	1.0	40	15	130	12.1	9.9
12	42	44	24	37.5	-	1.0	40	15	130	14.0	8.6
15	42	45	30	37.5	12.7	1.2	40	15	130	9.7	12.4
15	42	45	30	37.5	20.3	1.2	40	15	130	9.7	12.4
18	42	50	35	37.5	20.3	1.2	40	15	130	8.1	14.9
20	42	50	35	37.5	20.3	1.2	40	15	130	7.2	16.6
25	42	55	40	37.5	20.3	1.2	40	15	130	5.8	20.7
30	42	60	45	37.5	20.3	1.2	40	15	130	4.8	24.8

For DC-Link SMC4 series

■ Dimensions (mm)

U _N , 85°C : 1100Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ * (10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
20	57	43.5	29.5	52.5	12.7	1.2	20	27	260	14.5	8.3
20	57	43.5	29.5	52.5	20.3	1.2	20	27	260	14.5	8.3
25	57	50	35	52.5	20.3	1.2	20	27	260	11.6	10.4
30	57	50	35	52.5	20.3	1.2	20	27	260	9.7	12.4
35	57	55	45	52.5	20.3	1.2	20	27	260	8.4	14.3
40	57	55	45	52.5	20.3	1.2	20	27	260	7.8	15.5
45	57	55	45	52.5	20.3	1.2	20	27	260	6.9	17.4
50	57	65	45	52.5	20.3	1.2	20	27	260	6.2	19.3
55	57	65	45	52.5	20.3	1.2	20	27	260	5.6	21.3

For DC-Link SMC4 series

■ Dimensions (mm)

U _N , 85°C : 1200Vdc											
Cap. μF	W	H	T	P	P1	d	dV/dt (V/us)	tgδ * (10 ⁻⁴)		ESR @ 10KHz (mΩ)	I _{max} (A)
								1KHz	10KHz		
1.0	32	20	11	27.5	-	0.8	90	7	55	39.5	3.5
2.0	32	24.5	15	27.5	-	0.8	90	7	55	26.3	5.0
3.0	32	30	16	27.5	-	0.8	90	7	55	17.5	7.5
4.0	32	33	18	27.5	-	0.8	90	7	55	13.9	9.5
5.0	32	27	22	27.5	-	0.8	90	7	55	12.7	10.4
5.0	32	37	22	27.5	10.2	0.8	90	7	55	11.1	11.8
3.0	41	30	16	37.5	-	1.0	45	13	100	37.2	3.2
4.0	41	30	16	37.5	-	1.0	45	13	100	27.9	4.3
5.0	41	33.5	18.5	37.5	-	1.0	45	13	100	22.3	5.4
6.0	42	40	20	37.5	-	1.0	45	13	100	18.6	6.5
7.0	41	37	22	37.5	10.2	1.0	45	13	100	15.9	7.5
8.0	42	44	24	37.5	12.7	1.0	45	13	100	13.9	8.6
9.0	42	44	24	37.5	12.7	1.0	45	13	100	12.4	9.7
10	42	44	24	37.5	12.7	1.0	45	13	100	11.1	10.8
12	42	45	30	37.5	12.7	1.2	45	13	100	9.3	12.9
12	42	45	30	37.5	20.3	1.2	45	13	100	9.3	12.9
15	42	50	35	37.5	20.3	1.2	45	13	100	7.4	16.1
18	42	50	35	37.5	20.3	1.2	45	13	100	6.6	18.1
20	42	55	40	37.5	20.3	1.2	45	13	100	6.0	20.1
25	42	60	45	37.5	20.3	1.2	45	13	100	4.8	25.1
12	57	45	25	52.5	12.7	1.2	23	24	200	19.9	6.0
15	57	45	25	52.5	12.7	1.2	23	24	200	15.9	7.5
20	57	43.5	29.5	52.5	12.7	1.2	23	24	200	11.9	10.0
20	57	43.5	29.5	52.5	20.3	1.2	23	24	200	11.9	10.0
20	57	45	30	52.5	12.7	1.2	23	24	200	11.9	10.0
20	57	45	30	52.5	20.3	1.2	23	24	200	11.9	10.0
25	57	50	35	52.5	20.3	1.2	23	24	200	9.6	12.6
30	57	55	45	52.5	20.3	1.2	23	24	200	8.0	15.1
35	57	55	45	52.5	20.3	1.2	23	24	200	6.8	17.6
40	57	65	45	52.5	20.3	1.2	23	24	200	6.0	20.1
45	57	65	45	52.5	20.3	1.2	23	24	200	5.3	22.6

For DC-Link SMC4 series

■ Specifications

Test items	Performance	Test Method
Withstand voltage (Between Terminals)	Shall be no abnormality	1.5U _R , 10sec
Between terminal and Enclosure	Shall be no abnormality	U _R ×200%+1000Vac, 60sec
Insulation resistance (Between Terminals)	> 1000s	100Vdc, 60sec / 20°C
Capacitance	Within the tolerance specified	1KHz, 1Vrms Max. at 25°C
Tense Strength of Terminal	No wire breakage and no damage of capacitor	1. Load Force : 1.0 Kg 2. Holding Time : 10 ± 1sec
Bending Strength of Terminal	No wire breakage and no damage of capacitor	1. Load Force : 0.5 Kg 2. Bending Time : 4 x 90° in 5sec
Solderability	(1) Appearance : No visible damage (2) Covering an area of > solder 95%	1. Solder Temperature : 240±5°C 2. Solder Time : 3±0.5 sec
Heat Shock test	(1) Appearance : No visible damage (2) ΔC/C : ≤ 3% of the initial value (3) DF (tanδ) : Growth less than ≤ 0.004	The terminal of capacitor shall be immersed in the melting solder. a. Solder Temperature: 260±5°C b. Solder Time: 10±1sec
Cold Resistance	(1) Appearance : No visible damage (2) ΔC/C : ≤ 5% of the initial value	a. Test Temperature: -40°C b. Test Times: 2Hrs
Dry Heat Resistance	(3) DF (tanδ) : Growth less than ≤ 0.005 (4) IR : ≥ 50% of clause shall be satisfied	a. Test Temperature: 85°C b. Test Times: 16Hrs

For DC-Link SMC4 series

Test items	Performance	Test Method
Humidity Resistance	(1) Appearance : No visible damage (2) $\Delta C/C$: $\leq 5\%$ of the initial value (3) DF (tan δ) : Growth less than $\leq 200\%$ (4) IR : $\geq 50\%$ of clause shall be satisfied	a. Test Temperature: 40°C $\pm$ 2°C b. Relative Humidity: 90 ~ 95% c. Test Times: 500 $\pm$ 8Hrs d. Applied voltage: Rated voltage Then recovery at ordinary condition at least 6Hrs
Charge & Discharge	(1) Appearance : No visible damage (2) $\Delta C/C$: $\leq 5\%$ of the initial value (3) DF (tan δ) : Growth less than ≤ 0.005 (4) IR : $\geq 50\%$ of clause shall be satisfied	a. Test Voltage : Rated voltage charge for 0.5 sec. Discharge for 0.5 sec. b. Repeated for 10000 cycles
High Temp Loading test (Continuous)	(1) Appearance : No visible damage (2) DF (tan δ) : Growth less than ≤ 0.004 (3) $\Delta C/C$: $\leq 5\%$ of the initial value (4) IR : $\geq 50\%$ of clause shall be satisfied	a. Test Temperature: 85°C $\pm$ 2°C b. Test Times: 1000 $\pm$ 24Hrs c. Apply 125% of the rated voltage Then recovery at ordinary condition at least 6Hrs

■ Mark

Marking



1. WDC is a registered trademark of WINDAY	2. Capacitance: 205 indicates 2.0 μ F or 2000nF
3. Capacitors Tolerance: K= $\pm$ 10%	4. Rated Voltage: 1000Vdc, Indicates 1000
5. M4 for Metallized polypropylene film capacitor	

For DC-Link SMC4 series

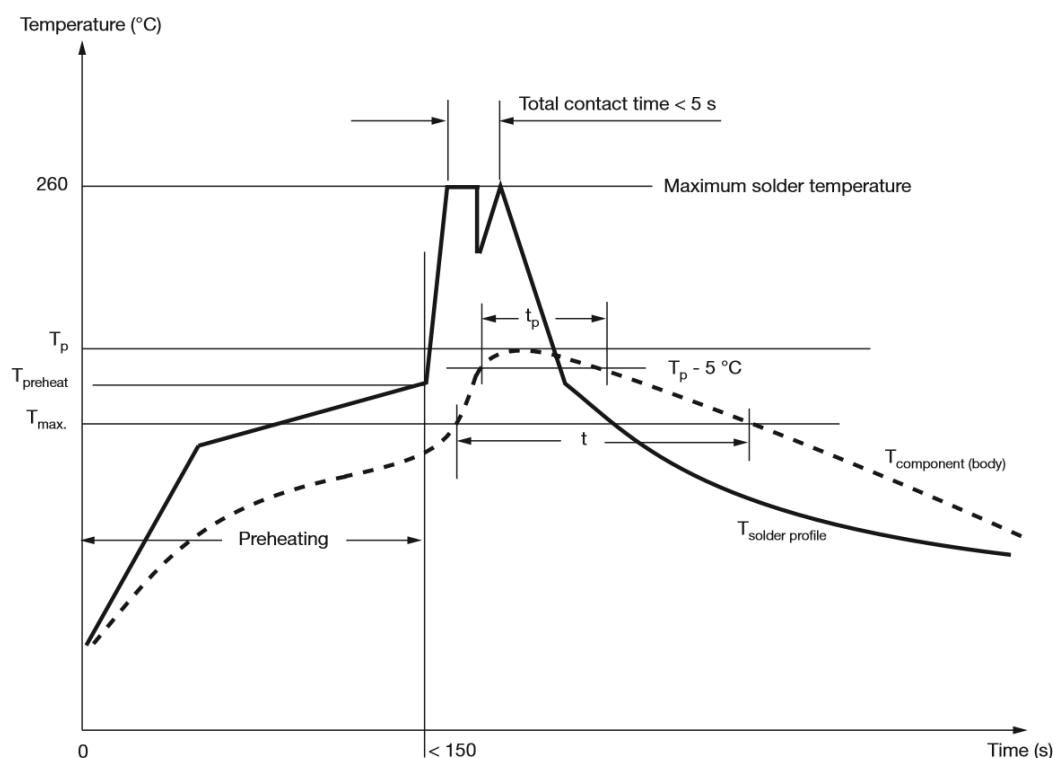
■ Soldering Guidelines for Film Capacitors

WDC recommends that users observe the following guidelines for soldering our film capacitors. Adherence to these recommendations will help to safeguard product specifications and reliability while preventing damage to the capacitors during soldering.

SOLDERING GUIDELINES AND RECOMMENDED WAVE SOLDERING PROFILE

With regard to the resistance to soldering heat and the solderability, our products comply with “IEC 60384-1” and the additional type specifications. The recommended wave soldering profile for our leaded components is defined as follows:

■ Wave Soldering Recommendations



T_p : Peak temperature of the component body (top)

$T_{max.}$: Maximum application temperature of the component

The PSL (Process Sensitivity Level) is classified according JEDEC standard J-STD-075 “Classification of Non-IC Electronic Components for Assembly Processes” and summarized in following tables per product family and pitch size of the component:

SERIES	PRODUCT PITCH SIZE							
	22.5 mm	27.5 mm	37.5 mm	52.5 mm	--	--	--	--
SMC4	--	(1),(6)	(1),(6)	(1),(6)	--	--	--	--

(1) No risk

During soldering: $T_p \leq 110^\circ\text{C}$, $t_p \leq 20\text{ s}$, $t \leq 30\text{ s}$

(2) Risk for parameter change if PSL is not strictly followed

(5) Temperature is measured at the body top and must be kept as follows:

(3) Risk for product damage if PSL is not strictly followed

During preheating: $T_{max.} \leq 110^\circ\text{C}$

(4) Temperature is measured at the body top and must be kept as follows:

During soldering: $T_p \leq 120^\circ\text{C}$, $t_p \leq 20\text{ s}$, $t \leq 30\text{ s}$

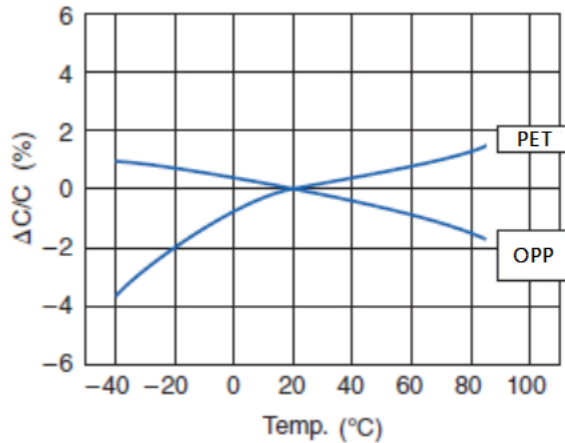
During preheating: $T_{max.} \leq 100^\circ\text{C}$

(6) The component has a preheat limitation of 150 °C

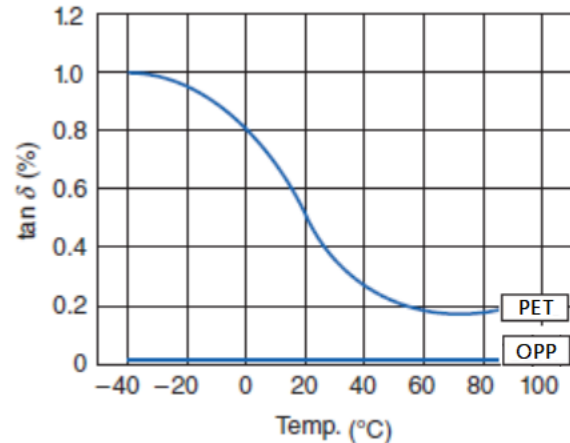
For DC-Link SMC4 series

■ Typical graphs

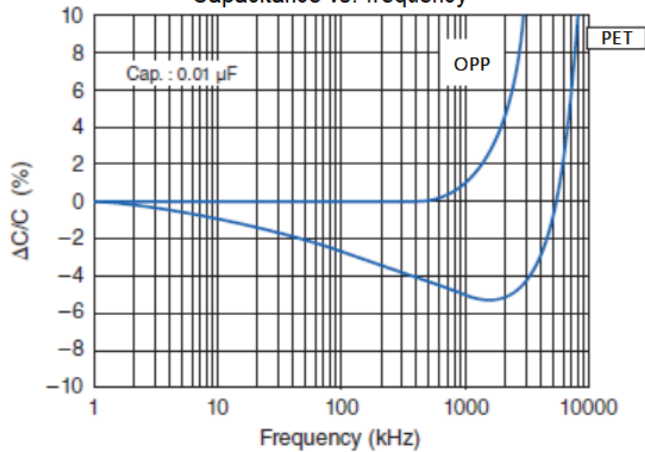
Capacitance vs. temperature at 1kHz



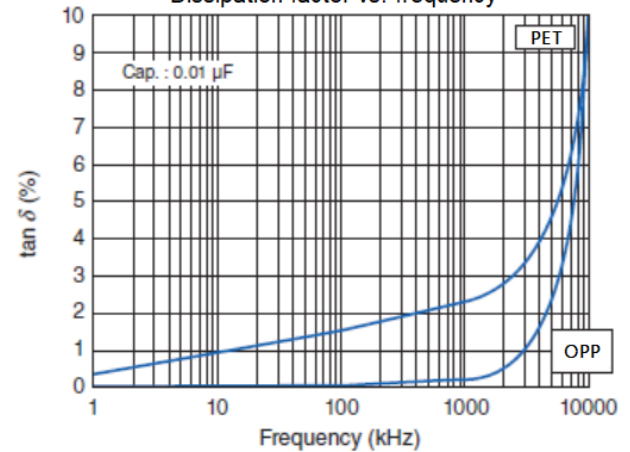
Dissipation factor vs. temperature at 1kHz



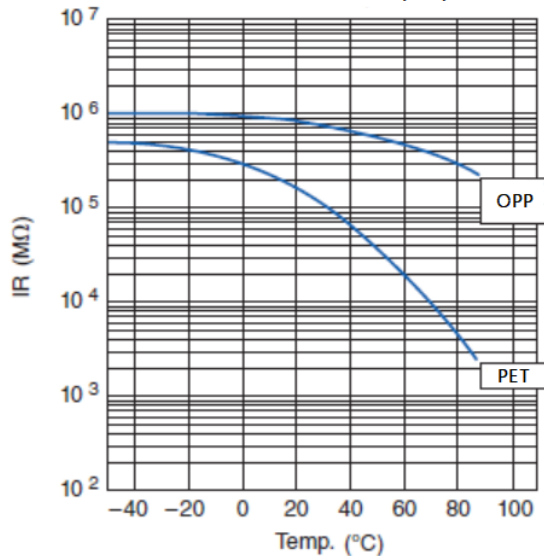
Capacitance vs. frequency



Dissipation factor vs. frequency



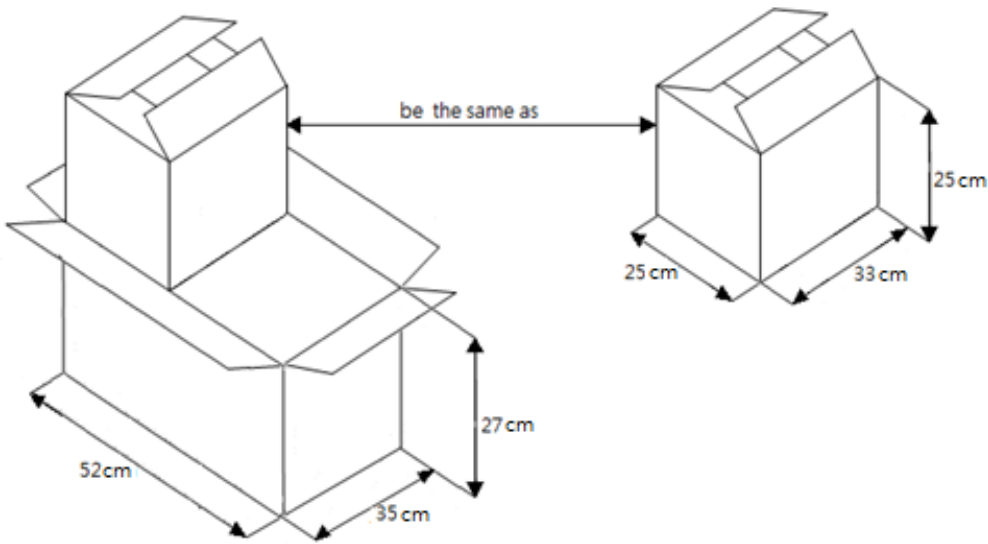
Insulation resistance (MΩ)



PET :	Metallized Polyester film capacitor
OPP :	Metallized Polypropylene film capacitor

For DC-Link SMC4 series

■ Packaging



Size (mm)	Pcs / Bag	Pcs / Inner carton (L33:cm XH:25cm X T:25cm)	Pcs / Out box (L52:cm XH:27cm X T:35cm)
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■ Storage conditions and duration

Packaged capacitors should be kept in clean, ventilated, dry coffers, not near the heat source, not subject to direct sunlight, is strictly prohibited and chemical reagents, acid and harmful gas storage together.

Capacitor at a temperature within the range 20 ~ 25 °C, humidity less than 50% of the state of storage for one year.