

IGBT-MP1 series

IGBT Snubber Capacitors Type

◆ Features

- » High peak & RMS current capability
- » Self-healing property.
- » Low DF, Low ESR, Low ESL
- » UL 510 polyester tape wrapping
- » UL 94 V-0 resin end fill (flame retardant execution)



◆ Construction

- » THE Type-MP1 is constructed with polypropylene film and dual metallized electrodes for both self healing properties and high peak current carrying capability (dv/dt). This series features very low ESR characteristics, excellent high frequency and high voltage capabilities, Indicate flat oval and axial lead.

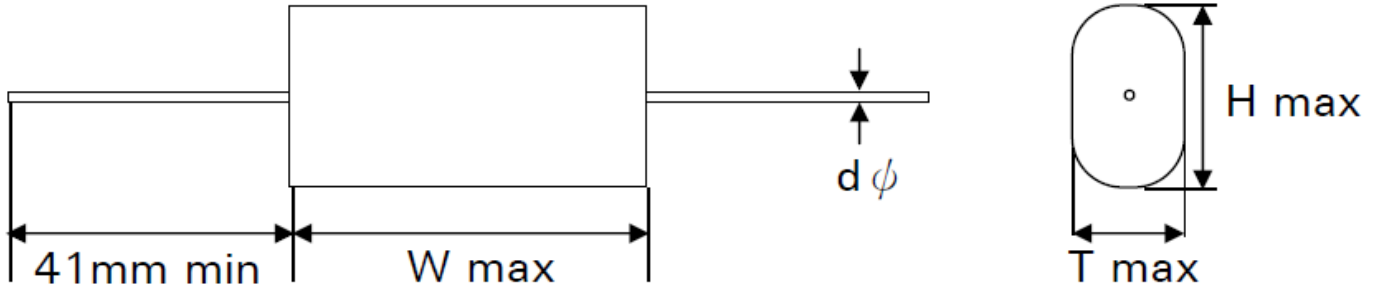
◆ Applications

- » Snubber capacitor for energy conversion and control in power semiconductor circuits, protection circuits in SMPSs, induction heaters , high voltage, high current and high pulse applications.

◆ Specification

- » Operating temperature : $-55^{\circ}\text{C} \sim +105^{\circ}\text{C}$ (Full rated voltage at 85°C derated linearly to 50% rated at 105°C)
- » Climatic category : 55/105/56 (IEC 60068-1)
- » Capacitance range : $0.01 \mu\text{F} \sim 4.7 \mu\text{F}$
- » Capacitance tolerance: J= $\pm 5\%$, K= $\pm 10\%$
- » Rated voltage (RV): 600, 850, 1000, 1200, 1600, 2000, 3000 Vdc
- » Dissipation factor (DF): $C \leq 1.0 \mu\text{F}$ DF=0.05% max , $C > 1.0 \mu\text{F}$ DF=0.06% max (at 1KHz 25°C)
- » Testing voltage (TV): 160% of RV applied for 10sec / 200% of RV applied for 2sec.
- » Insulation resistance (IR) 25°C : $C \leq .33 \mu\text{F}$, $\geq 100,000\text{M}\Omega$, $C > .33 \mu\text{F}$, $\geq 33,000\text{M}\Omega \times \mu\text{F}$, Measured at $100 \pm 15\text{vdc}, 60\text{s}$
- » Reference standard : IEC 61071
- ».Life expectancy : $\geq 100,000$ hours(RV)

◆ Dimension



600VDC/275VAC

Capacitance (uF)	W mm Max	H mm Max	T mm Max	dφ mm ±0.05	ESR (mΩ)	ESL (nH)	dv/dt (V/us)	Ipeak (A)	Irms 70°C (100KHz A)
0.1	34	11.9	5.7	0.8	28	17	196	20	2.8
0.15	34	13	6.8	0.8	13	18	196	29	4.4
0.22	34	14.3	8.1	0.8	12	19	196	43	4.9
0.33	34	16.1	9.8	0.8	9	19	196	65	6.1
0.47	34	18	11.7	0.8	7	20	196	92	7.6
0.68	34	20.4	14.2	1	6	21	196	133	8.9
1	34	23.5	17.3	1	6	23	196	196	9.9
1.5	34	27.5	21.3	1.2	5	24	196	294	12.1
2	46	27.6	18.2	1.2	5	28	128	256	13.1
3.3	54	31.8	22.5	1.2	4	34	105	347	17.3
4.7	54	33.3	28.6	1.2	4	36	105	494	18.7

850VDC/450VAC

Capacitance (uF)	W mm Max	H mm Max	T mm Max	dφ mm ±0.05	ESR (mΩ)	ESL (nH)	dv/dt (V/us)	Ipeak (A)	Irms 70°C (100KHz A)
0.15	34	15.9	9.6	0.8	8	19	713	107	6.4
0.22	34	17.9	11.6	0.8	8	20	713	157	7
0.33	34	20.6	14.3	1	7	21	713	235	8.3
0.47	34	23.4	17.1	1	5	22	713	335	10.8
0.68	34	27	20.7	1.2	5	24	713	485	13.3
1	46	26.7	17.2	1.2	5	28	400	400	12.7
1.5	46	30.9	21.5	1.2	4	30	400	600	15.8
2	46	34.6	25.1	1.2	3	31	400	800	19.8
2.2	46	35.9	26.5	1.2	3	32	400	880	20.4
2.5	46	37.8	28.4	1.2	3	33	400	1000	21.2

1000VDC/500VAC

Capacitance (uF)	W mm Max	H mm Max	T mm Max	dφ mm ±0.05	ESR (mΩ)	ESL (nH)	dv/dt (V/us)	Ipeak (A)	Irms 70°C (100KHz A)
0.15	34	17.5	11.2	0.8	7	20	856	128	7.4
0.22	34	19.9	13.6	1	7	21	856	188	8.1
0.33	34	23	16.7	1	6	22	856	283	9.7
0.47	34	26.3	20.1	1.2	5	24	856	402	11.7
0.68	34	30.5	24.2	1.2	5	26	856	582	13
1	46	29.8	20.4	1.2	5	24	480	480	13.8
1.5	46	34.8	25.4	1.2	4	31	480	720	17.3
2	46	39.1	29.7	1.2	3	33	480	960	21.7

1200VDC/500VAC

Capacitance (uF)	W mm Max	H mm Max	T mm Max	dψ mm ±0.05	ESR (mΩ)	ESL (nH)	dv/dt (V/us)	Ipeak (A)	Irms 70 °C (100KHz A)
0.1	34	18	11.7	0.8	9	20	1142	114	6.7
0.15	34	20.7	14.4	1	7	21	1142	171	8.3
0.22	34	23.8	17.5	1	7	23	1142	251	9.2
0.33	46	24	14.6	1	7	21	640	211	10
0.47	46	27.1	17.7	1.2	7	28	640	301	10.9
0.68	46	31.1	21.7	1.2	6	30	640	435	13
1	46	36.1	26.7	1.2	5	32	640	640	15.9
1.5	54	40.2	27.6	1.2	4	36	502	754	19.7

1600VDC/500VAC

Capacitance (uF)	W mm Max	H mm Max	T mm Max	dψ mm ±0.05	ESR (mΩ)	ESL (nH)	dv/dt (V/us)	Ipeak (A)	Irms 70 °C (100KHz A)
0.1	34	20.6	14.3	1	7	21	1427	143	8.3
0.15	34	23.9	17.7	1	7	23	1427	214	11
0.22	34	27.8	21.5	1.2	7	24	1427	314	10.3
0.33	46	27.6	18.2	1.2	7	23	800	264	11
0.47	46	31.4	22	1.2	6	30	800	376	13.1
0.68	46	36.3	26.9	1.2	6	32	800	544	14.5
1	46	42.5	33.1	1.2	5	35	800	800	17.9
1.5	54	47	34.5	1.2	4	39	628	942	22.2

2000VDC/500VAC

Capacitance (uF)	W mm Max	H mm Max	T mm Max	dψ mm ±0.05	ESR (mΩ)	ESL (nH)	dv/dt (V/us)	Ipeak (A)	Irms 70 °C (100KHz A)
0.022	34	14.2	7.9	0.8	35	18	1712	38	2.8
0.033	34	16	9.7	0.8	20	19	1712	57	4.1
0.047	34	17.8	11.6	0.8	12	20	1712	80	5.7
0.068	34	20.2	14	1	8	21	1712	116	7.7
0.1	34	23.3	17	1	8	22	1712	171	9.1
0.15	46	23.6	14.1	1	8	21	960	144	9.8
0.22	46	26.8	17.4	1	8	28	960	211	10.1
0.33	46	31.2	21.7	1.2	8	30	960	317	11.3
0.47	46	35.8	26.3	1.2	6	32	960	451	14.4
0.56	54	36.5	23.9	1.2	7	31	754	422	13.9
0.68	54	39.2	26.7	1.2	6	35	754	513	15.8
1	54	45.6	33.1	1.2	5	38	754	754	19.4

3000VDC/500VAC

Capacitance (uF)	W mm Max	H mm Max	T mm Max	dψ mm ±0.05	ESR (mΩ)	ESL (nH)	dv/dt (V/us)	Ipeak (A)	Irms 70 °C (100KHz A)
0.01	34	14.1	7.8	0.8	60	18	2568	26	2.2
0.015	34	15.8	9.5	0.8	40	19	2568	39	2.9
0.022	34	17.8	11.5	0.8	25	20	2568	57	4
0.033	34	20.4	14.2	1	14	21	2568	85	5.8
0.047	46	20.7	11.3	1	14	20	1440	68	6.3
0.068	46	23.3	13.8	1	12	26	1440	98	7.4
0.1	46	26.5	17.1	1.2	10	28	1440	144	9
0.15	46	30.7	21.3	1.2	8	30	1440	216	11.2

Please contact us for special dimensions or items not listed.
 All product specification and data are subject to change without notice.