

Metallized Polypropylene IGBT Snubber Capacitors

Series Code
121

Main Application

IGBT snubber capacitors are used in high voltage, high current and high pulse applications such as IGBT protection circuits, snubber network protection circuits in SMPS energy conversion and control in power electronics.

Construction

Double metallized film and MPP film internal series encased in flame retardant box.

Climatic Category

40/85/56

Maximum Operating Temperature

85°C

Applicable Specification

IEC 61071

Capacitance Value

0.047µF-5.6µF

Insulation Resistance

Minimum Insulation Resistance R_{IS} 30000 s
(or) time constant $T=C_R \times R_{IS}$

Capacitance Tolerance

±5%, ±10%

Rated Voltage

700VDC-3000VDC

Voltage Proof

Between terminals: 2 times of the rated voltage for 10 sec.

Tan δ

0.06% (maximum) at 1 kHz.

Life Test Conditions

(Loading at elevated temperature)

Loaded at 1.25 times of rated voltage at 85°C for 1000 hours.

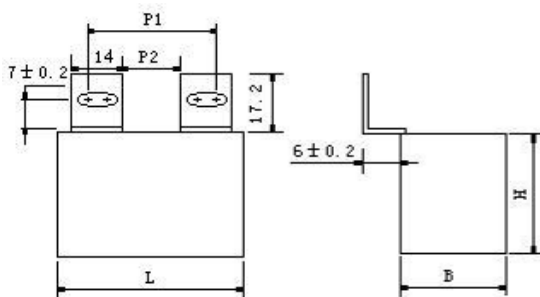
After The Test

$\Delta C/C \leq 3\%$ of initial value.

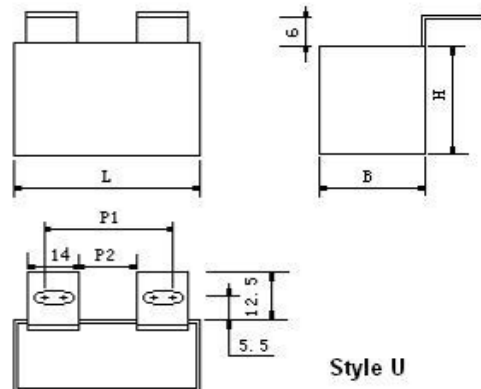
Increase of Tan δ: ≤ 1.4 times the value measured before the test.

Insulation Resistance: $\geq 50\%$ of the value mentioned in IR chart.

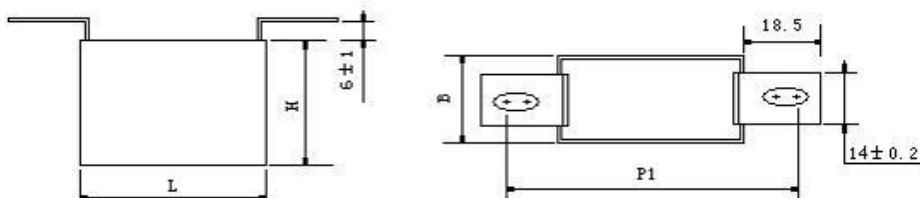
Style →	Style B				Style U				Style E
Length (mm)	P2	P1	P2	P1	P2	P1	P2	P1	P1
43.0	11	23-28	8	20-25	11	23-28	8	20-25	51-64
57.5	11	23-28	24	37-42	11	23-28	24	37-42	66-79



Style B



Style U



Style E

Metallized Polypropylene IGBT Snubber Capacitors



Series Code 121

Ordering code and packing units: Metallized Polypropylene IGBT Snubber Capacitors
Series Code 121

Rated Cap. (μF)	Dimensions (mm)			dv/dt (V/μs)	I _{peak} (A)	I _{rms} (max) (A)	ESR (mΩ)	Ordering Code
	W (±0.5)	H (±0.5)	L (±0.5)					
Ur 700VDC, Urms 380VAC, Upk 1000VDC								
1.20	24.5	27.5	43.0	325	390	16.5	3.1	121 125 +2K *^
2.00	33.5	36.0	43.0	325	650	22.0	2.5	121 205 +2K *^
2.20	33.5	36.0	43.0	325	715	22.5	2.4	121 225 +2K *^
2.50	33.5	36.0	43.0	325	812	23.0	2.2	121 255 +2K *^
3.00	34.0	46.0	43.0	325	975	26.0	2.1	121 305 +2K *^
3.30	34.0	46.0	43.0	325	1072	26.0	2.1	121 335 +2K *^
3.50	34.0	46.0	43.0	325	1140	27.0	2.0	121 355 +2K *^
4.00	30.0	46.0	57.5	220	880	27.0	2.3	121 405 +2K *^
4.70	35.0	50.0	57.5	220	1034	31.0	2.1	121 475 +2K *^
5.00	35.0	50.0	57.5	220	1100	31.0	2.1	121 505 +2K *^
5.60	35.0	50.0	57.5	220	1232	32.0	2.0	121 565 +2K *^
Ur 850VDC, Urms 450VAC, Upk 1200VDC								
0.82	24.5	27.5	43.0	400	328	15.5	3.1	121 824 +2M *^
1.00	24.5	27.5	43.0	400	400	17.5	2.7	121 105 +2M *^
1.50	33.5	36.0	43.0	400	600	23.0	2.2	121 155 +2M *^
2.00	33.5	36.0	43.0	400	700	23.5	2.2	121 205 +2M *^
2.20	33.5	36.0	43.0	400	800	26.5	2.0	121 225 +2M *^
2.50	34.0	46.0	43.0	400	880	27.0	2.0	121 255 +2M *^
3.00	30.0	46.0	57.5	400	1000	28.0	1.9	121 305 +2M *^
3.30	30.0	46.0	57.5	280	840	28.5	2.2	121 335 +2M *^
4.00	35.0	50.0	57.5	280	924	29.5	2.1	121 405 +2M *^
4.70	35.0	50.0	57.5	280	1120	32.0	1.9	121 475 +2M *^
Ur 1000VDC, Urms 480VAC, Upk 1400VDC								
0.68	24.5	27.5	43.0	500	340	15.0	3.3	121 684 +3A *^
0.75	24.5	27.5	43.0	500	375	15.5	3.2	121 754 +3A *^
1.20	33.5	36.0	43.0	500	600	22.0	2.5	121 125 +3A *^
1.50	33.5	36.0	43.0	500	750	23.5	2.2	121 155 +3A *^
1.70	34.0	46.0	43.0	500	875	25.5	2.1	121 175 +3A *^
2.00	34.0	46.0	43.0	500	1000	26.5	2.0	121 205 +3A *^
2.20	30.0	46.0	57.5	350	770	26.5	2.5	121 225 +3A *^
3.00	35.0	50.0	57.5	350	1050	31.0	2.1	121 305 +3A *^
3.30	35.0	50.0	57.5	350	1155	31.0	2.0	121 335 +3A *^
Ur 1200VDC, Urms 500VAC, Upk 1600VDC								
0.33	24.5	27.5	43.0	650	210	12.0	5.1	121 334 +2P *^
0.39	24.5	27.5	43.0	650	254	13.0	4.6	121 394 +2P *^
0.47	24.5	27.5	43.0	650	308	14.0	4.1	121 474 +2P *^
0.56	24.5	27.5	43.0	650	365	14.5	3.7	121 564 +2P *^
0.68	33.5	36.0	43.0	650	442	19.0	3.3	121 684 +2P *^
0.82	33.5	36.0	43.0	650	533	20.0	3.0	121 824 +2P *^
1.00	33.5	36.0	43.0	650	650	20.5	2.7	121 105 +2P *^
1.20	34.0	46.0	43.0	650	780	23.5	2.4	121 125 +2P *^
1.50	34.0	46.0	43.0	650	975	25.0	2.1	121 155 +2P *^
2.00	30.0	46.0	57.5	455	910	27.0	2.4	121 205 +2P *^
2.20	35.0	50.0	57.5	455	1000	30.0	2.4	121 225 +2P *^
2.50	35.0	50.0	57.5	455	1138	31.0	2.3	121 255 +2P *^
3.00	35.0	50.0	57.5	455	1365	32.0	2.1	121 305 +2P *^

Metallized Polypropylene IGBT Snubber Capacitors



Series Code 121

Ordering code and packing units: Metallized Polypropylene IGBT Snubber Capacitors
Series Code 121 (continued)

Rated Cap. (μ F)	Dimensions (mm)			dv/dt (V/ μ s)	I _{peak} (A)	I _{rms} (max) (A)	ESR (m Ω)	Ordering Code
	W (\pm 0.5)	H (\pm 0.5)	L (\pm 0.5)					
Ur 1500VDC, Urms 575VAC, Upk 2000VDC								
0.33	24.5	27.5	43.0	800	264	13.5	4.6	121 334 +3R *^
0.39	24.5	27.5	43.0	800	312	14.0	4.3	121 394 +3R *^
0.47	33.5	36.0	43.0	800	376	18.0	3.7	121 474 +3R *^
0.68	33.5	36.0	43.0	800	544	19.5	3.1	121 684 +3R *^
0.75	33.5	36.0	43.0	800	600	20.5	2.8	121 754 +3R *^
1.00	34.0	46.0	43.0	800	800	23.0	2.5	121 105 +3R *^
1.20	30.0	46.0	57.5	560	672	25.0	2.8	121 125 +3R *^
1.50	35.0	50.0	57.5	560	840	28.0	2.5	121 155 +3R *^
1.80	35.0	50.0	57.5	560	1008	29.5	2.3	121 185 +3R *^
Ur 1700VDC, Urms 575VAC, Upk 2000VDC								
0.22	24.5	27.5	43.0	880	194	13.2	5.3	121 224 +3S *^
0.33	24.5	27.5	43.0	880	290	14.0	5.0	121 334 +3S *^
0.47	33.5	36.0	43.0	880	414	19.0	3.8	121 474 +3S *^
0.56	33.5	36.0	43.0	880	493	19.5	3.1	121 564 +3S *^
0.68	33.5	36.0	43.0	880	598	20.0	2.9	121 684 +3S *^
0.82	34.0	46.0	43.0	880	722	22.1	2.5	121 824 +3S *^
1.00	30.0	46.0	57.5	610	610	23.5	2.7	121 105 +3S *^
1.20	30.0	46.0	57.5	610	732	26.2	2.6	121 125 +3S *^
1.50	35.0	50.0	57.5	610	915	28.5	2.4	121 155 +3S *^
Ur 2000VDC, Urms 630VAC, Upk 2400VDC								
0.10	24.5	27.5	43.0	1000	100	8.0	13.0	121 104 +3D *^
0.15	24.5	27.5	43.0	1000	150	10.5	7.5	121 154 +3D *^
0.22	24.5	27.5	43.0	1000	220	12.0	5.1	121 224 +3D *^
0.33	33.5	36.0	43.0	1000	330	16.5	4.1	121 334 +3D *^
0.39	33.5	36.0	43.0	1000	390	17.5	3.6	121 394 +3D *^
0.47	34.0	46.0	43.0	1000	470	20.5	3.2	121 474 +3D *^
0.56	34.0	46.0	43.0	1000	560	21.5	3.0	121 564 +3D *^
0.68	30.0	46.0	57.5	700	476	22.5	3.5	121 684 +3D *^
0.82	30.0	46.0	57.5	700	574	24.0	3.1	121 824 +3D *^
1.00	35.0	50.0	57.5	700	700	27.0	2.8	121 105 +3D *^
1.20	35.0	50.0	57.5	700	840	29.0	2.4	121 125 +3D *^
Ur 2500VDC, Urms 700VAC, Upk 3000VDC								
0.10	24.5	27.5	43.0	1350	135	9.0	11.2	121 104 +3E *^
0.15	24.5	27.5	43.0	1350	202	11.0	7.2	121 154 +3E *^
0.22	33.5	36.0	43.0	1350	297	15.0	5.2	121 224 +3E *^
0.33	33.5	36.0	43.0	1350	445	18.0	3.8	121 334 +3E *^
0.47	34.0	46.0	43.0	1350	634	22.0	3.0	121 474 +3E *^
0.56	30.0	46.0	57.5	945	529	22.5	3.5	121 564 +3E *^
0.68	35.0	50.0	57.5	945	634	25.0	3.2	121 684 +3E *^
0.82	35.0	50.0	57.5	945	775	26.0	2.9	121 824 +3E *^
Ur 3000VDC, Urms 750VAC, Upk 3500VDC								
0.047	24.5	27.5	43.0	1600	75	7.4	17.0	121 473 +3F *^
0.068	24.5	27.5	43.0	1600	109	9.0	12.0	121 683 +3F *^
0.100	33.5	36.0	43.0	1600	160	12.0	8.5	121 105 +3F *^
0.150	33.5	36.0	43.0	1600	240	14.5	6.1	121 154 +3F *^
0.220	34.0	46.0	43.0	1600	352	17.6	4.3	121 224 +3F *^
0.330	30.0	46.0	57.5	870	287	21.0	4.2	121 334 +3F *^
0.470	35.0	50.0	57.5	870	409	23.0	3.9	121 473 +3F *^

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DC Voltage Codification

A		B		C		D		E		F		G	
1A	10	1B	12.5	1C	16	1D	40	1E	25	1F	30	1G	40
2A	100	2B	125	2C	160	2D	400	2E	250	2F	300	2G	400
3A	1000	3B	1250	3C	1600	3D	4000	3E	2500	3F	3000	3G	4000

H		I		J		K		L		M		N	
1H	50	1I	45	1J	63	1K	70	1L	80	1M	85	1N	90
2H	500	2I	450	2J	630	2K	700	2L	800	2M	850	2N	900
3H	5000	3I	4500	3J	6300	3K	7000	3L	8000	3M	8500	3N	9000

O		P		Q		R		S	
1O	110	1P	120	1Q	57.5	1R	15	1S	17
2O	1100	2P	1200	2Q	575	2R	150	2S	170
3O	11000	3P	12000	3Q	5750	3R	1500	3S	1700