



## Series C31 IGBT Snubber Capacitors

**Features:** Flame retardant to UL94, extended double side metallized carrier film with internal series connection and metallized film, plastic case with resin sealing, tinned copper lugs, high pulse current, high dv/dt, low ESL and ESR, self healing.

**Applications:** Widely used in UPS, inverter, induction heaters, welding machine for IGBT snubber protection

### Specifications

**1) Reference Standards**

GB/T 17702 IEC 61071

**2) Operating Temperature**

-40°C to 85°C.

**3) Capacitance**

0.047  $\mu$ F to 10  $\mu$ F.

**4) Rated Voltage**

700 VDC to 3000 VDC

**5) Tolerance**

$\pm$ 5%  $\pm$ 10%

**6) Test Voltage Between Terminals**

1.5 x rated DC voltage 10s 25°C  $\pm$  5°C

**7) Test Voltage Between Terminals and Case**

3000 V 50Hz 60s, 25°C  $\pm$  5°C.

**8) Dissipation Factor**

$\text{tg}\delta \leq 6 \times 10^{-4}$  at 25°C  $\pm$  5°C, 1 kHz.

**9) Insulation Resistance**

$C \times R \geq 30000S$ , at 100 VDC, 25°C  $\pm$  5°C, 6

**10) Life Expectancy**

200000h at rated voltage and 70°C

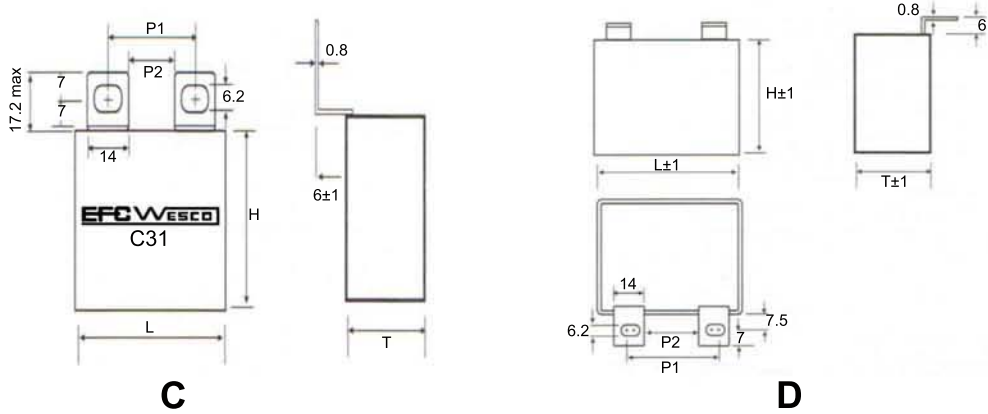


Please consult factory for special requirements, including non-standard values and sizes

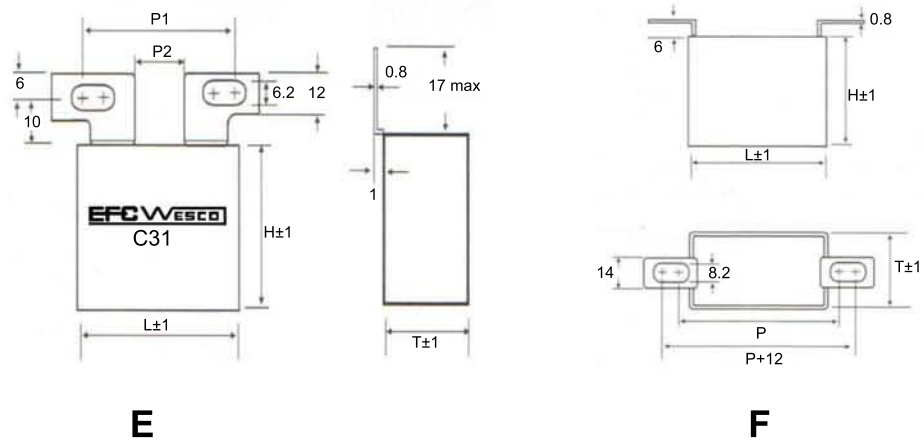
# C31

Plastic Case with Resin Sealing

# IGBT Snubber Capacitors



Style	C1		C2		D1		D2	
L	P1	P2	P1	P2	P1	P2	P1	P2
42.5	23-28	11	20-25	8	23-28	11	20-25	8
57.5	12-28	11	36-41	24	23-28	11	36-41	24



Style	E1		E2		E3		F1
L	P1	P2	P1	P2	P1	P2	P
42.5	29-39	11	33-45	15			50
57.5	29-39	11	33-45	15	46-58	28	65



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**IGBT Snubber Capacitors**

**Dimensions and Ratings**

Cap.	<b>700 VDC (380 VAC)</b>							
μF	Part #	Dimension (mm)			dv/dt V/μs	I <sub>peak</sub> A	I <sub>rms</sub> A	ESR (mΩ)
		L	T	H				
1.0	C31DB701105KT**#	42.5	24.5	27.5	325	325	15.0	3.2
1.2	C31DB701125KT**#	42.5	24.5	27.5	325	390	16.0	3.1
1.5	C31DB701155KT**#	42.5	24.5	27.5	325	487	18.0	2.8
2.0	C31DB701205KT**#	42.5	28.0	37.0	325	650	22.0	2.5
2.2	C31DB701225KT**#	42.5	28.0	37.0	325	715	22.0	2.4
2.5	C31DB701255KT**#	42.5	28.0	37.0	325	812	22.5	2.2
3.0	C31DB701305KT**#	42.5	33.0	45.0	325	975	25.5	2.1
3.3	C31DB701335KT**#	42.5	33.0	45.0	325	1072	26.0	2.0
3.5	C31DB701355KT**#	42.5	33.0	45.0	325	1134	26.5	2.0
4.0	C31DB701405KT**#	57.5	30.0	45.0	220	880	27.0	2.3
4.7	C31DB701475KT**#	57.5	35.0	50.0	220	1034	30.0	2.1
5.6	C31DB701565KT**#	57.5	35.0	50.0	220	1232	32.0	2.1
6.8	C31DB701685KT**#	57.5	35.0	50.0	220	1496	32.0	2.0
10.0	C31DB701106KT**#	57.5	42.5	56.0	220	2200	33.0	1.5

Cap.	<b>1000 VDC (480 VAC)</b>							
μF	Part #	Dimension (mm)			dv/dt V/μs	I <sub>peak</sub> A	I <sub>rms</sub> A	ESR (mΩ)
		L	T	H				
0.68	C31DB102684KT**#	42.5	24.5	27.5	480	326.4	15.0	3.3
1.0	C31DB102105KT**#	42.5	28.0	37.0	480	480	17.0	3.0
1.2	C31DB102125KT**#	42.5	33.5	35.5	480	576	20.0	2.5
1.5	C31DB102155KT**#	42.5	33.5	35.5	480	720	23.0	2.2
2.0	C31DB102205KT**#	42.5	33.0	45.0	480	960	26.0	2.0
2.2	C31DB102225KT**#	57.5	30.0	45.0	350	770	26.0	2.5
2.5	C31DB102255KT**#	57.5	30.0	45.0	350	875	28.0	2.2
3.0	C31DB102305KT**#	57.5	35.0	50.0	350	1050	31.0	2.1
3.3	C31DB102335KT**#	57.5	30.0	45.0	350	1155	31.0	2.0
4.7	C31DB102475KT**#	57.5	42.5	56.0	350	1750	33.0	1.6



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## IGBT Snubber Capacitors

### Dimensions and Ratings

Cap.	<b>1200 VDC (500 VAC)</b>							
μF	Part #	Dimension (mm)			dv/dt V/μs	I <sub>peak</sub> A	I <sub>rms</sub> A	ESR (mΩ)
		L	T	H				
0.2	C31DB122224KT**#	42.5	24.5	27.5	650	143	11.0	5.1
0.3	C31DB122334KT**#	42.5	24.5	27.5	650	210	12.0	5.0
0.5	C31DB122474KT**#	42.5	24.5	27.5	650	308	14.0	4.2
0.6	C31DB122564KT**#	42.5	24.5	27.5	650	364	14.5	4.0
0.7	C31DB122684KT**#	42.5	33.5	35.5	650	422	18.5	3.3
0.8	C31DB122824KT**#	42.5	33.5	35.5	650	533	20.0	3.1
1.0	C31DB122105KT**#	42.5	33.5	35.5	650	650	20.5	3.0
1.2	C31DB122125KT**#	42.5	33.0	45.0	650	780	23.0	2.5
1.5	C31DB122155KT**#	42.5	33.0	45.0	650	975	25.0	2.3
2.0	C31DB122205KT**#	57.5	30.0	45.0	450	950	27.0	2.5
2.2	C31DB122225KT**#	57.5	35.0	50.0	450	990	30.0	2.3
2.5	C31DB122255KT**#	57.5	35.0	50.0	450	1125	31.0	2.1
3.0	C31DB122305KT**#	57.5	35.0	50.0	450	1350	32.0	2.0
4.7	C31DB122475KT**#	57.5	35.0	50.0	450	2115	34.0	1.8

Cap.	<b>1600 VDC (500 VAC)</b>							
μF	Part #	Dimension (mm)			dv/dt V/μs	I <sub>peak</sub> A	I <sub>rms</sub> A	ESR (mΩ)
		L	T	H				
0.33	C31DB162334KT**#	42.5	24.5	27.5	850	280.5	13.0	5.0
0.47	C31DB162474KT**#	42.5	33.5	35.5	850	399.5	18.0	4.1
0.56	C31DB162564KT**#	42.5	33.5	35.5	850	476	19.0	3.6
0.68	C31DB162684KT**#	42.5	33.5	35.5	850	578	20.0	3.1
0.82	C31DB162824KT**#	42.5	33.5	35.5	850	697	21.0	2.8
1.0	C31DB162105KT**#	42.5	33.5	35.5	850	850	22.0	2.5
1.2	C31DB162125KT**#	57.5	30.0	45.0	650	780	25.0	2.8
1.5	C31DB162155KT**#	57.5	35.0	50.0	650	975	28.0	2.3
2.0	C31DB162205KT**#	57.5	42.5	56.0	650	1300	30.0	2.1



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**DC Link Polypropylene Capacitors**

**Dimensions and Ratings**

Cap.	<b>2000 VDC (630 VAC)</b>							
µF	Part #	Dimension (mm)			dv/dt V/µs	I <sub>peak</sub> A	I <sub>rms</sub> A	ESR (mΩ)
		L	T	H				
0.1	C31DB202104KT**#	42.5	24.5	27.5	1000	100	8.0	12.0
0.15	C31DB202154KT**#	42.5	24.5	27.5	1000	150	10.0	9.0
0.22	C31DB202224KT**#	42.5	24.5	27.5	1000	220	12.0	6.0
0.33	C31DB202334KT**#	42.5	33.5	35.5	1000	330	16.0	4.0
0.47	C31DB202474KT**#	42.5	33.0	45.0	1000	470	20.0	3.5
0.56	C31DB202564KT**#	42.5	33.0	45.0	1000	560	21.0	3.0
0.68	C31DB202684KT**#	57.5	30.0	45.0	700	476	22.0	3.6
0.82	C31DB202824KT**#	57.5	30.0	45.0	700	574	24.0	3.2
1.0	C31DB202105KT**#	57.5	35.0	50.0	700	700	27.0	2.8

Cap.	<b>3000 VDC (750 VAC)</b>							
µF	Part #	Dimension (mm)			dv/dt V/µs	I <sub>peak</sub> A	I <sub>rms</sub> A	ESR (mΩ)
		L	T	H				
0.047	C31DB302473KT**#	42.5	24.5	27.5	1500	70.5	7.0	17.0
0.068	C31DB302683KT**#	42.5	24.5	27.5	1500	102	9.0	12.0
0.10	C31DB302104KT**#	42.5	33.5	35.5	1500	150	12.0	9.0
0.15	C31DB302154KT**#	42.5	33.5	35.5	1500	225	14.0	6.0
0.22	C31DB302224KT**#	42.5	33.0	45.0	1500	330	16.0	3.0
0.33	C31DB302334KT**#	57.5	30.0	45.0	800	264	21.0	3.6
0.47	C31DB302474KT**#	57.5	35.0	50.0	800	376	22.0	3.0