

Type SCD IGBT Snubber Capacitor Modules

Direct Mount Snubber Capacitor



Highlights

- High peak & RMS current capability
- Mount directly to the IGBT module
- Low inductance <20nH
- Low loss polypropylene dielectric
- Self healing
- Flame resistant case and resin, meets UL94V0
- Other terminal spacing and capacitance values available. We can build to your specs!
- 85°C ambient temperature



Complies with the EU Directive 2002/95/EC requirement restricting the use of Lead (Pb), Mercury (Hg), Cadmium (Cd), Hexavalent chromium (Cr(VI)), PolyBrominated Biphenyls (PBB) and PolyBrominated Diphenyl Ethers (PBDE).

Applications

Style SCD offers protection against voltage transients in low to medium current IGBT applications where high dV/dt is encountered. Connect these capacitors from C1 to E2 on a dual IGBT module or from P to N on a six-pack module to eliminate severe voltage transients. Parts ending with Z25 fit IGBTs with 23mm, 25mm and 28mm lead spacing. If you have a preferred lead spacing, please specify.

Specifications

Capacitance Tolerance: ±10% standard tolerance

Dissipation Factor: <0.1% at 1 kHz, 25 °C

Dielectric Withstand: 1.6 x rated voltage for 60 seconds (terminal to terminal)

Insulation Resistance: 30,000 MΩ min. after 2 minutes of electrification @ 100 Vdc & 25 °C

Test Voltage

Terminals to Case: 3.0 KV 50/60 Hz for 60 sec. @ 25 °C

Capacitance Temperature Coefficient:

Service Life: -200 ppm/°C ±100 ppm

30,000 hours @ rated Vac, 70 °C

Accelerated Life: 60,000 hours @ rated Vdc, 70 °C

1.25 x rated DC voltage at 85 °C

Performance: for 2,000 hours

<3% capacitance change

ESR < 125% of initial reading

Accelerated Pulse Testing: IR >50% of initial limit

per IEC-384

Performance: <3% in capacitance change

<.003 increase in DF from initial value

Ratings

Catalog Part Number	Cap. (μF)	Volts (Vdc)	Volts		IpK (A)	ESR (mΩ)	Irms 100 kHz		W (in)	L (mm)	H (in)	H (mm)
			60 Hz (Vac)	dV/dt (V/μs)			55 °C (Arms)	(mm)				
600 Vdc												
SCD474K601A3Z25-F	0.47	600	330	250	118	9	9.2	0.97	24.6	1.85	47.0	0.95 24.1
SCD684K601A3Z25-F	0.68	600	330	250	170	7	11.5	1.14	29.0	1.85	47.0	1.05 26.7
SCD105K601A3Z25-F	1.00	600	330	200	200	5	14.0	1.14	29.0	1.85	47.0	1.05 26.7
SCD155K601A3Z25-F	1.50	600	300	150	225	4	17.1	1.14	29.0	1.85	47.0	1.05 26.7
SCD205K601A3Z25-F	2.00	600	300	150	300	3	20.7	1.27	32.3	1.78	45.1	1.40 35.6
SCD335K601A3Z25-F	3.30	600	400	300	825	5	35.0	1.50	38.1	2.05	52.1	1.50 38.1
SCD475K601A3Z25-F	4.70	600	400	250	1175	4	46.2	1.83	46.4	2.23	56.5	1.98 50.2
1000 Vdc												
SCD474K102A3Z25-F	0.47	1000	330	250	118	11	9.2	0.97	24.6	1.85	47.0	0.95 24.1
SCD474K102D3Z25-F	0.47	1000	500	700	329	8	12.1	1.14	29.0	1.85	47.0	1.05 26.7
SCD684K102A3Z25-F	0.68	1000	330	200	136	7	11.5	1.14	29.0	1.85	47.0	1.05 26.7
SCD684K102D3Z25-F	0.68	1000	500	500	340	7	14.4	1.14	29.0	1.85	47.0	1.05 26.7
SCD105K102A3Z25-F	1.00	1000	330	200	200	4	14.0	1.14	29.0	1.85	47.0	1.05 26.7
SCD105K102D3Z25-F	1.00	1000	500	400	400	5	17.5	1.14	29.0	1.85	47.0	1.05 26.7
SCD155K102A3Z25-F	1.50	1000	300	160	240	4	17.9	1.27	32.3	1.78	45.1	1.40 35.6
SCD155K102D3Z25-F	1.50	1000	500	400	600	3	22.4	1.37	34.8	1.78	45.1	1.40 35.6
SCD205K102A3Z25-F	2.00	1000	300	160	320	4	20.9	1.37	34.8	1.78	45.1	1.40 35.6
SCD205K102D3Z25-F	2.00	1000	500	400	800	5	26.2	1.50	38.1	2.05	52.1	1.50 38.1

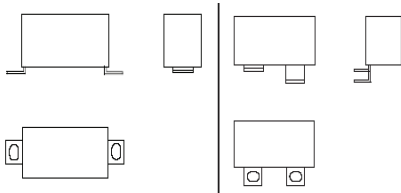
Type SCD IGBT Snubber Capacitor Modules

Catalog Part Number	Cap. (µF)	Volts		100 kHz				W (in)	L (in)	H (in)			
		(Vdc)	60 Hz (Vac)	dV/dt (V/µs)	IpK (A)	ESR (mΩ)	Irms 55 °C (Arms)						
1200 Vdc													
SCD224K122A3Z25-F	0.22	1200	580	650	143	19	7.9	0.97	24.6	1.85	47.0	0.95	24.1
SCD334K122A3Z25-F	0.33	1200	580	650	215	13	10.0	1.14	29.0	1.85	47.0	1.05	26.7
SCD474K122A3Z25-F	0.47	1200	580	500	235	10	12.0	1.14	29.0	1.85	47.0	1.05	26.7
SCD684K122A3Z25-F	0.68	1200	580	500	340	7	15.1	1.27	32.3	1.78	45.1	1.40	35.6
SCD105K122A3Z25-F	1.00	1200	580	500	500	5	18.5	1.37	34.8	1.78	45.1	1.40	35.6
SCD155K122A3Z25-F	1.50	1200	580	400	600	4	23.9	1.50	38.1	2.05	52.1	1.50	38.1
SCD205K122A3Z25-F	2.00	1200	580	400	800	4	30.1	1.83	46.4	2.23	56.5	1.98	50.2
SCD305K122C3Z25-F	3.00	1200	580	400	1200	5	39.7	3.00	76.2	2.48	62.9	1.50	38.1
1600 Vdc													
SCD224K162A3Z25-F	0.22	1600	630	650	143	19	7.9	0.97	24.6	1.85	47.0	0.95	24.1
SCD334K162A3Z25-F	0.33	1600	630	650	215	12	10.0	1.14	29.0	1.85	47.0	1.05	26.7
SCD474K162A3Z25-F	0.47	1600	630	650	306	10	12.6	1.27	32.3	1.78	45.1	1.40	35.6
SCD684K162A3Z25-F	0.68	1600	630	650	442	7	15.3	1.37	34.8	1.78	45.1	1.40	35.6
SCD105K162A3Z25-F	1.00	1600	630	500	500	6	19.5	1.50	38.1	2.05	52.1	1.50	38.1
SCD155K162A3Z25-F	1.50	1600	630	400	600	5	25.6	1.65	41.9	2.70	68.6	1.50	38.1
SCD205K162A3Z25-F	2.00	1600	630	400	800	5	30.6	1.75	44.5	2.63	66.7	1.83	46.4
2000 Vdc													
SCD224K202A3Z25-F	0.22	2000	630	800	176	19	8.2	0.97	24.6	1.85	47.0	0.95	24.1
SCD334K202A3Z25-F	0.33	2000	630	800	264	13	10.5	1.27	32.3	1.78	45.1	1.40	35.6
SCD474K202A3Z25-F	0.47	2000	630	600	282	10	13.0	1.35	34.3	2.20	55.9	1.20	30.5
SCD684K202A3Z25-F	0.68	2000	630	600	408	8	16.1	1.50	38.1	2.05	52.1	1.50	38.1
SCD105K202A3Z25-F	1.00	2000	630	600	600	6	21.3	1.83	46.4	2.23	56.5	1.98	50.2

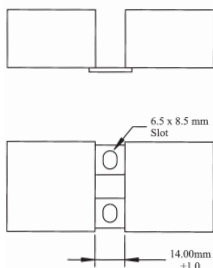
Note: Modify Catalog Part Number to specify lead spacing. Example: 44mm spacing would use -44 instead of Z25. Other capacitance values and lead orientations are available. Contact us.

Mounting Across the Bus?

CDE Will Accommodate Your Bus Structure



Dual Snubber Assembly Option



Outline Drawings

