



ES Components

An Authorized - Franchised Distributor

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**Rugged & Rated for
1200 Volts
600 Amps**

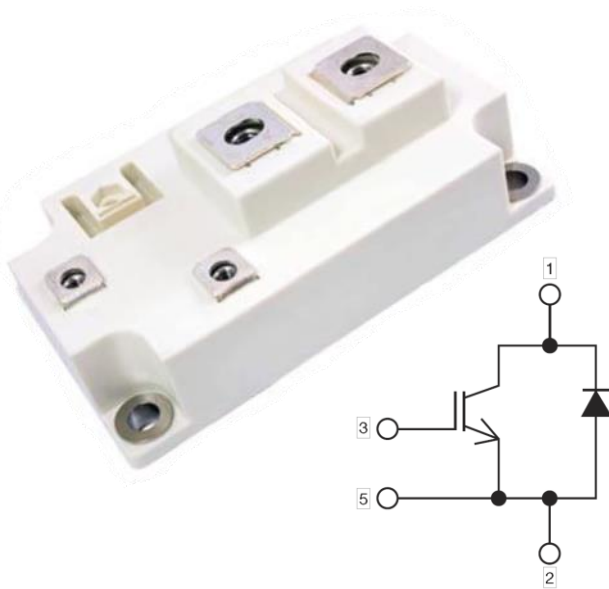
Solutions for Energy Storage Systems High Voltage High Current IGBT Modules



Vishay – ESC
Engineered Solutions

- ✓ 1200 Volt (Vces)
- ✓ 600 Amps
- ✓ Low Vce (on)
- ✓ Single switch configuration
- ✓ High power (KW) and High Energy (KJ) discharge

Example of High Voltage High Current IGBT Modules



Double INT-A-PAK

- ✓ High short circuit capability, self limiting to 6 x IC
- ✓ 10 μ s short circuit capability
- ✓ VCE(on) with positive temperature coefficient
- ✓ Low inductance case
- ✓ Fast and soft reverse recovery antiparallel FWD
- ✓ Isolated copper baseplate using DCB (Direct Copper Bonding) technology

Vishay's IGBT power module provides ultralow conduction loss as well as short circuit ruggedness.

Contact ES Components today for more info.



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Many IGBT Module Configurations Available

Circuit	VCE(V)	IC (A)	TC (°C)	VCEON (V)	TJ (°C)	EON (mJ)	EOFF (mJ)	Speed (kHz)
Full bridge	1200	20	96	3.29	150	0.93	0.61	8 to 30
Full bridge	1200	20	106	3.29	150	1.29	0.81	8 to 30
Half bridge	1200	40	104	3.36	150	1.6	1.62	8 to 30
3-levels neutral point clamp topology	1200	40	80	2.12	150	0.33	0.48	8 to 30
Double interleaved boost converter	1200	15	80	2.61	150	1.18	0.72	8 to 30
Chopper low side switch	1200	100	80	1.77	150	8.4	5.8	8 to 30
Chopper low side switch	1200	100	80	1.8	150	9.8	8.7	8 to 30
Chopper high side switch	1200	100	80	1.9	150	7.85	10.55	8 to 30
Half bridge	1200	100	80	1.9	150	7.85	10.55	8 to 30
Half bridge	1200	100	80	3.1	150	7.2	5.5	8 to 30
Half bridge	1200	100	80	1.8	150	7.85	10.55	8 to 30
4 pack with thermistor	1200	87	80	3.52	150	4.32	4.48	8 to 60
Chopper low side switch	1200	150	80	1.87	150	16.7	15.3	8 to 30
Half bridge	1200	150	80	1.9	150	9.95	16	8 to 30
Half bridge	1200	150	80	3.1	150	17.5	11	8 to 30
4 pack with thermistor	1200	124	80	3.45	150	7.74	7.2	8 to 60
Chopper low side switch	1200	200	80	2.07	150	21	18	8 to 30
Chopper high side switch	1200	200	80	1.8	150	21	18	8 to 30
Half bridge	1200	200	80	1.9	150	15.9	22.3	8 to 30
Half bridge	1200	200	80	3.1	150	22	16.2	8 to 30
Single switch with AP diode	1200	300	80	1.9	150	31	27	8 to 30
Chopper low side switch	1200	300	80	2	150	31.5	35.9	8 to 30
Chopper high side switch	1200	300	80	2	150	31.5	35.9	8 to 30
Half bridge	1200	300	80	2	150	31.5	35.9	8 to 30
Half bridge	1200	300	80	3.1	150	24.9	28.4	8 to 30
Single switch with AP diode	1200	400	80	1.9	150	35	46	8 to 30
Single switch with AP diode	1200	400	80	3.1	150	26.1	36.7	8 to 30
Half bridge	1200	400	80	1.9	150	48	43	8 to 30
Half bridge	1200	400	80	3.1	150	26.1	36.7	8 to 30
Chopper low side switch	1200	50	80	1.7	150	4.1	4.7	8 to 30
Half bridge	1200	50	80	1.75	150	7.3	5.22	8 to 30
4 PACK	1200	44	80	3.49	150	1.68	1.77	8 to 30
Chopper low side switch	1200	57	80	3.3	150	3.43	1.29	8 to 60
High side switch	1200	57	80	3.3	150	3.43	1.29	8 to 60
Single switch with AP diode	1200	600	80	1.9	150	45	60	8 to 30
Half bridge	1200	75	80	1.9	150	9.75	7.05	8 to 30
Half bridge	1200	75	80	3.2	150	6.8	3.2	8 to 30
4 PACK	1200	67	80	3.4	150	2.25	3.35	8 to 30
4 pack with thermistor	1200	67	80	3.4	150	2.44	2.35	8 to 30
Single switch diode	1200	90	90	3.3	150	1.7	4.08	8 to 30
Single Switch no diode	1200	90	90	3.3	150	1.7	4.08	8 to 30
Chopper low side switch	1200	92	80	2.45	150	6.88	5.66	4 to 30
High side switch	1200	92	80	2.45	150	6.88	5.66	4 to 30
Single switch diode	1200	175	90	1.73	150	6	10.4	8 to 30
Current fed inverter topology	1200	341	25	2.17	150	36.1	32.1	8 to 30
Half bridge	1200	50	80	1.65	175	6.63	3.25	8 to 30

Applications

- Grid Storage
- Wind Farms
- Solar Farms
- Industrial
- Railroad
- Military
- Electric/Hybrid Cars and Buses



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