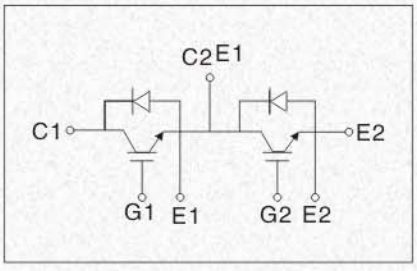
Half-bridge IGBT Module

Features:

- Smarted trench gate technology design
- 10μs short circuit capability
- Low turn-off losses
- Short tail current for over 18kHz, 20kHz
- Positive $V_{CE(ON)}$ temperature coefficient



Applications:

- AC & DC motor controls
- Electrolysis machine
- VVVF inverters
- High frequency SMPS
- Optimized for high frequency inverter type welding machines
- Servo control
- UPS, EPS
- Robotics

Series SIM75D12SV1 / SIM100D12SV1 / SIM150D12SV3 / SIM200D12SV3

Absolute Maximum Ratings @T_C=25℃ (per leg, for reference only)

Type	I_C @T_C=80℃ A	V_{CES} @V_{GE}=0V V	I_C mA	V_{GES} V	I_{CM} A	T_C ℃	I_F (diode) A	T_C ℃	I_{FM} (diode) A	t_{SC} μs	V_{ISO} @AC 1min V	T_j ℃	T_{stg} ℃	Outline
SIM75D12SV1	75	1200	0.5	±20	150	80	75	80	150	10	2750	-40～150	-40～125	HV1
SIM100D12SV1	100				200	25	100	80	200		2500			
							140	25						
SIM150D12SV3	150	1280	1.0	±20	300	80	150	80	300	10	2500	-40～150	-40～125	HV3
SIM200D12SV3	200	1200			400	25	200	80	400					
							260	25						

Electrical Characteristics @Tj=25℃ (for reference only)

Type	$V_{(BR)CES}$ @V_{GE}=0V V	I_C mA	$V_{CE(ON)}$ @V_{GE}=15V V	I_C A	$V_{GE(th)}$ @V_{CE}=V_{GE} V	I_C μA	I_{CES} @V_{GE}=0V V_{CE}=1200V μA	I_{GES} @V_{CE}=0V V_{GE}=±20V μA	V_{FM} (diode) V	I_C A	C_{ies} pF	$t_{d(on)}$ ns	t_r ns	t_{rr} (diode) ns
SIM75D12SV1	1400	0.2	1.7	75	6.0	500	300	±0.4	1.6	75	6000	100	40	160
SIM100D12SV1	1374		2.1	100	6.5	250	500	±0.1	2.1	100	8653	342	45	100
SIM150D12SV3	1400	1.0	1.8	150	6.0	500	300	±0.5	1.4	150	9000	150	60	165
SIM200D12SV3	1200		2.15	200	6.5	500	1000	±0.2	2.15	200	17306	300	108	250