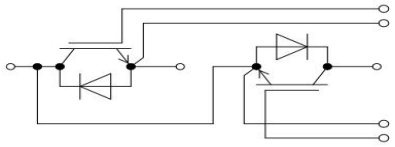
IGBT MODULE 2-PACK TYPE

Features

- Ic=300A
- Ultrafast switching speed
- Excellent short circuit ruggedness
- Low conduction loss



Equivalent Circuit Schematic

Typical Applications

- IGBTs offer ultrafast switching speed for application such as Welding,inductive heating,UPS and other high frequency Application.

Absolute Maximum Ratings

V_{CES}	Collector to Emitter Voltage		1200	V
V_{GES}	Continuous Gate to Emiiter Voltage		+/-30	V
I_C	Continuous Collector Current	T_C=25℃	600	A
		T_C=100℃	300	
I_{CM}	Pulse Collector Current	T_J =150℃	600	A
P_D	Maximum Power Dissipation(IGBT)	T_C=25℃	1080	W
t_{sc}	Short Circuit Withstand Time		〉10	μs
T_J	Maximum IGBT Junction Temperature		-40~+150	℃
T_{JOP}	Maximum Operating Junction temperature Rang		-40~+150	℃
T_{stg}	Storage Temperature Range		-40~+125	℃

Electrical Characteristics at T_J=25℃ (Unless Otherwisen Specified)

Parameter		Test Condition	Min.	Typ.	Max.	Unit
BV_{CES}	Collector to Emitter Breakdown Voltage	V_{GE}=0V,I_C=1mA	1200			V
I_{CES}	Collector to Emitter Leakage Current	V_{GE}=0V, V_{CE}= V_{CES}			1	mA
I_{GES}	Gate to Emitter Leakage Current	V_{GE} =+/-30V, V_{CE}=0V			1000	nA
$V_{GE(th)}$	Gate Threshold Voltage	I_C=1mA, V_{CE}=V_{GE}	5.0		7.0	V
$V_{CE(sat)}$	Collector to Emitter Saturation Voltage (Module Level)	I_C=300A T_J=25℃ V_{GE}=15V		1.65	1.90	V

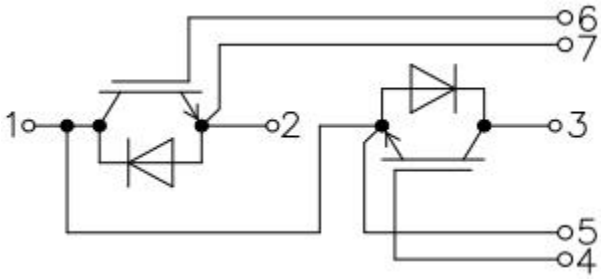
Switching Characteristics

$t_{d(on)}$	Turn-on Delay Time	V_{CC}=600V I_C=300A R_G=10Ω V_{GE}=+/-15V Inductive Load	T_J=25℃		440		ns
			T_J=125℃		510		
t_r	Turn-on Rise Time		T_J=25℃		560		ns
			T_J=125℃		630		
$t_{d(off)}$	Turn-off Delay Time		T_J=25℃		850		ns
			T_J=125℃		960		
t_f	Turn-off Fall Time		T_J=25℃		250		ns
			T_J=125℃		300		
E_{on}	Turn-on Switching Loss		T_J=25℃		8.2		mJ
			T_J=125℃		9.5		
E_{off}	Turn-off Switching Loss		T_J=25℃		22.3		mJ
			T_J=125℃		34		
Q_g	Total Gate Charge		T_J=25℃		920		nC
R_{gint}	Integrated Gate Resistor	f=1M,V_{pp}=1V	T_J=25℃		9.50		Ω
C_{ies}	Input Capacitance	V_{CE}=25V V_{GE}=0V f=1MHZ	T_J=25℃		28000		pF
C_{oes}	Output Capacitance		T_J=25℃		1220		
C_{res}	Reverse Transfer capacitance		T_J=25℃		1850		
R_{jc}	Thermal Resistance,Junction-to-Case					0.11	℃/W

Module Characteristics

Parameter		Min.	Typ.	Max.	Unit
V_{iso}	Isolation Voltage(All terminals Shorted) f=50Hz, 1Minute	2500		3000	V
R_{cs}	Case-to-Sink(Conductive Grease Applied)		0.05		℃/W
M	Power Terminals Screw M6	4.0		6.0	Nm
M	Mounting Screw M6	4.0		6.0	Nm
G	Weight		300		g

Internal Circuit:



Package Dimension in Millimeter