

“HALF-BRIDGE” IGBT

V_{CES} = 1200V
I_c = 300A
V_{CE(ON)} typ. = 1.7V
@I_c = 300A

Feature

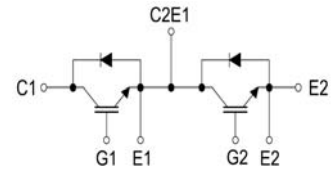
- IGBT New Technology
- Low V_{CE} (sat)
- Low Turn-off losses
- Short tail current
- Positive temperature coefficient

Application

- AC & DC Motor controls
- General purpose inverters
- Optimized for high current inverter (AC TIG Welding machines)
- Servo Controls
- UPS, Robotics



Package : V3



Absolute Maximum Ratings @ T_j=25°C (Per Leg)

Symbol	Parameter	Condition	Ratings	Unit
V _{CES}	Collector-to-Emitter Voltage	V _{GE} = 0V, I _c = 4mA	1200	V
I _c	Continuous Collector Current		300	A
I _{c(puls)}	Pulsed collector current, t _p limited by T _{jmax}		500	A
V _{GE}	Gate emitter voltage		± 20	V
V _{iso}	Isolation Voltage test	AC @ 1 minute	2500	V
T _j	Junction Temperature		-40 ~ 150	°C
T _{stg}	Storage Temperature		-40 ~ 125	°C
Weight	Weight of Module		360	g
Md	Mounting torque with screw M5		2.0	N.m
	Terminal connection torque		2.0	N.m

Static Characteristics @ T_j = 25°C (unless otherwise specified)

Parameters		Min	Typ	Max	Unit	Test conditions
V _{(BR)CES}	Collector-to-Emitter Breakdown Voltage	1200	—	—	V	V _{GE} = 0V, I _c = 6mA
V _{CE(ON)}	Collector-to-Emitter Saturation Voltage	1.4	1.7	2.1		I _c = 300A, V _{GE} = 15V
V _{GE(th)}	Gate Threshold Voltage	5.0	5.8	6.5		V _{CE} = V _{GE} , I _c = 4mA
I _{CES}	Zero Gate Voltage Collector Current	—	—	20	μA	V _{GE} = 0V, V _{CE} = 1200V
I _{GES}	Gate-to-Emitter Leakage Current	—	—	600	nA	V _{CE} = 0V, V _{GE} = 20V
R _{GINT}	Integrated gate resistor	—	5	—	Ω	

Electrical Characteristic Values (IGBT / DIODE) @ T_j = 25°C (unless otherwise specified)

Parameters		Min	Typ	Max	Unit	Test conditions
C _{iss}	Input capacitance	—	10766	—	pF	V _{CE} = 25V , V _{GE} = 0V f = 1 MHz
C _{oss}	Output capacitance	—	563	—		
C _{rss}	Reverse transfer capacitance	—	488	—		
t _{d(on)}	Turn-on delay time	—	300	—	ns	T _j = 125°C , V _{CC} = 600V I _C = 300A , V _{GE} = ±15V R _G = 8.2 Ω
t _r	Rise time	—	95	—		
t _{d(off)}	Turn-off delay time	—	650	—		
t _f	Fall time	—	180	—		
I _R	Reverse leakage current	—	—	27	μA	V _R = 1200V
V _{BR}	Cathode-Anode breakdown Voltage	1200	—	—	V	I _R = 0.25mA
V _f	Forward voltage drop	1.2	1.6	1.9		I _F = 300A

* Data and specifications subject to change without notice.

Package Outline (dimensions in mm)

