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(T_{vj} = 25°C unless otherwise specified)

V_{CES}	Collector−Emitter Voltage	Gate−emitter = 0 V	1200	V
V_{GES}	Gate−Emitter Voltage	Collector−emitter = 0 V	±20	V
I_C	Continuous Collector Current	T_C = 90°C	±800	A
I_{PULSE}	Repetitive Pulsed Collector Current	T_C = 25°C, t_p = 1 ms	±1600	A
T_{vjop}	Operating Junction Temperature		−40~175	°C
T_{SCWT}	Short Circuit Withstand Time, Non Repetitive	V_{GE} ≤ 15 V, VDC+ ≤ 800 V	8	μs

V_{ISO}	Isolation Voltage	RMS, f = 60 HZ, pins to base plate	3.4	kV
T_{STG}	Storage Temperature		−40~125	°C
M_T	Mounting torque to main terminals (Note 1)	M6 screw	6.0	N·m
M_H	Mounting torque to heat sink (Note 1)	M5 screw		

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. Recommendable value: 3.0 ~ 6.0 N·m

R_{thJCQ}	Junction to Case Thermal Resistance (Note 2)	Per IGBT	–	–	0.0498	°C/W
R_{thJCD}		Per diode	–	–	0.0889	
R_{thCHQ}	Case to Heat−Sink Thermal Resistance (Note 2)	Per IGBT, 1 W/(m·K) thermal grease	–	0.0282	–	
R_{thCHD}		Per diode, 1 W/(m·K) thermal grease	–	0.0342	–	

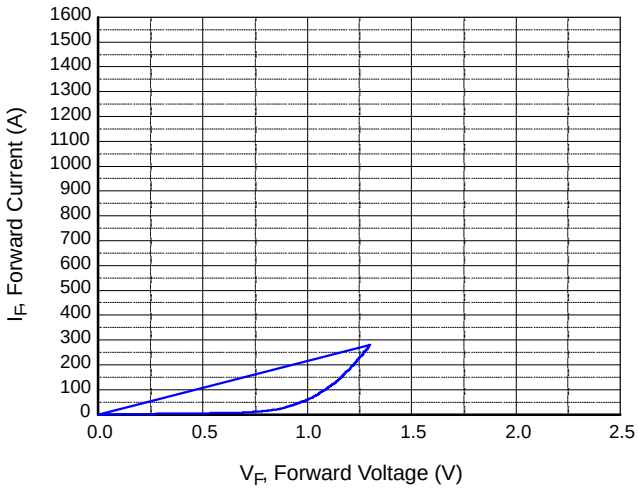
2. Data from characterization.

R_{25}	Nominal Resistance	T_{NTC} = 25°C	–	5	–	kΩ
R_{100}		T_{NTC} = 100°C	–	493.3	–	Ω
ΔR	Deviation on R_{100}	T_{NTC} = 100°C				

(Tvj = 25°C unless otherwise specified)

$V_{CE(SAT)}$ (Pin 8−9)	Collector−Emitter Saturation Voltage	V_{GE} = 15 V, I_C = 800 A	T_{vj} = 25°C	–	1.65	2.05	V
$V_{CE(SAT)}$ (Chip) (Note 3)			T_{vj} = 25°C	–	1.44	1.85	
			T_{vj} = 125°C	–	1.63	–	
			T_{vj} = 175°C	–	1.75	–	
$V_{GE(TH)}$							

(Tvj = 25°C unless otherwise specified) (continued)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1.0
1.5
2.0
2.5
I_F, Forward Current (A)
V_F, Forward Voltage (V)

(continued)

E_{rec}, Reverse Recovery Energy Loss (mJ)

t, Switching Time (ns)

I_C, Collector Current (A)

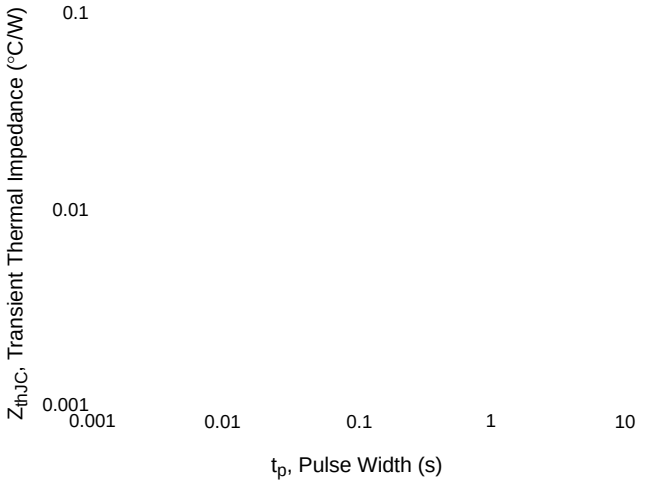
IGBT // Diode Capacitance (nF)

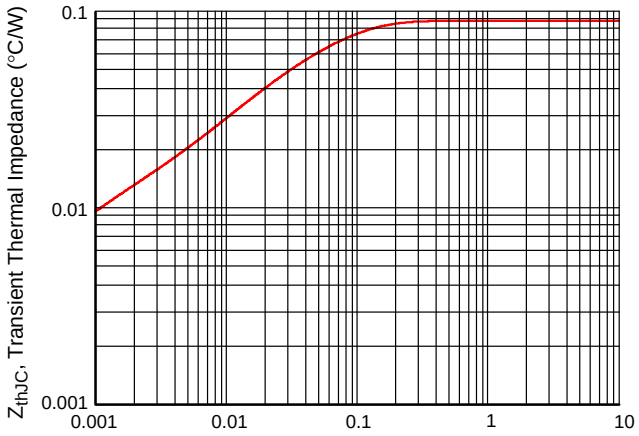
V_{GE}, Gate−Emitter Voltage (V)

V_{CE}, Collector−Emitter Voltage (V)

Q_g, Gate Charge (μC)

(continued)

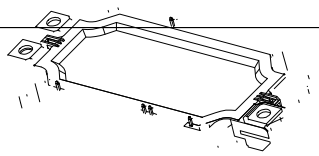




I_C, Collector Current (A)

Thermistor Resistance (kΩ)

Thermistor Temperature (°C)



PIM11, 152.00x62.15x17.00

CASE 180HT

ISSUE E

DATE 28 MAY 2024