Features

- Low $V_{CE(sat)}$ With SPT+ Technology
- $V_{CE(sat)}$ With Positive Temperature Coefficient
- Including Fast & Soft Recovery Anti-parallel FWD
- High Short Circuit Capability(10us)
- Low Inductance Module Structure
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

IGBT Modules

1200V 300A

Applications

- Inverter for Motor Drive
- AC and DC Servo Driver Amplifier
- UPS(Uninterruptible Power Supplies)
- Soft Switching Welding Machine

Maximum Ratings

- Maximum Junction Temperature : 175°C
- Operating Junction Temperature Range : -40°C to +150°C
- Storage Temperature Range: -40°C to +125°C
- IGBT Thermal Resistance: 0.09 K/W Junction to Case
- Diode Thermal Resistance: 0.12 K/W Junction to Case
- Type Conductive Grease Applied Thermal Resistance: 0.035K/W Junction to Case-To-Sink

Parameter		Symbol	Rating	Unit
Collector-Emitter Voltage@V_{GE}=0V,I_C=1mA, T_{vj}=25ºC		V_{CES}	1200	V
Continuous Collector Current @T_C=100ºC		I_C	300	A
Peak Collector Current @Tp=1ms		I_{CRM}	600	A
Gate-Emitter Voltage@T_{vj}=25ºC		V_{GE}	±20	V
Isolation Voltage @f=50Hz, t=1min		V_{iso}	2500~4000	V
Weight of Module		G	315	g
Module Electrodes Torque:M5		M_t	2.5~5	N*m
Module-to-Sink Torque:M6		M_S	3~5	N*m
Total Power Dissipation (IGBT-Inverter)	T_C=25°C T_{vjmax}=150°C	P_{tot}	1700	W

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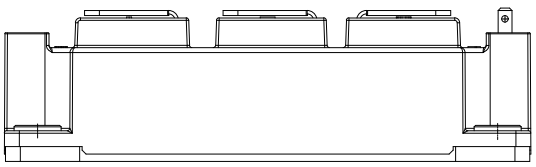
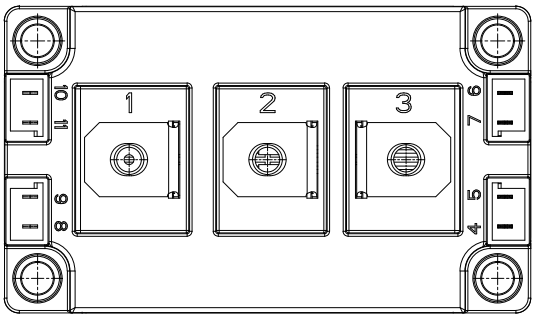
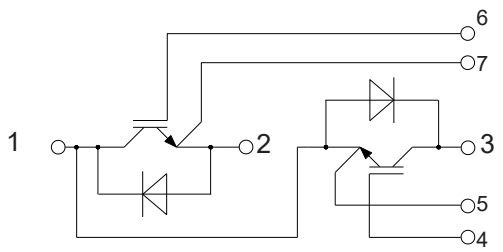




Circuit Diagram



Electrical Characteristics of IGBT @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Gate-Emitter Threshold Voltage	$V_{GE(th)}$	V_{CE}=V_{GE},I_C=8mA,T_{vj}=25°C	5.2	5.8	6.4	V
Collector-Emiter Cut-off Current	I_{CES}	V_{CE}=1200V, V_{GE}=0V,T_{vj}=25°C			1.0	mA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V_{GE}=15V, I_C=300A,T_{vj}=25°C		1.85	2.20	V
		V_{GE}=15V, I_C=300A,T_{vj}=125°C		2.2		
		V_{GE}=15V, I_C=300A,T_{vj}=150°C		2.3		
Gate Charge	Q_G			2.6		uC
Input Capacitance	C_{ies}	V_{CE}=25V,V_{GE}=0V,f=1MHz, T_{vj}=25°C		18.4		nF
Reverse Transfer Capacitance	C_{res}			0.9		
Internal Gate Resistance	Rgint			2.5		Ω
Gate Emitter Leakage Current	I_{GES}	V_{CE}=0V, V_{GE}=20V,T_{vj}=25°C			400	nA
Turn-On Delay Time	$t_{d(on)}$	V_{CE}=600V, I_C=300A, V_{GE}=±15V, R_G=1.8Ω, Tvj=25°C		174		ns
Rise Time	t_r			38		
Turn-Off Delay Time	$t_{d(off)}$			425		
Fall Time	t_f			104		
Energy Dissipation During Turn-on Time	E_{on}			17.4		mJ
Energy Dissipation During Turn-off Time	E_{off}			21.0		
Turn-On Delay Time	$t_{d(on)}$	V_{CE}=600V, I_C=300A, V_{GE}=±15V, R_G=1.8Ω, Tvj=125°C		185		ns
Rise Time	t_r			42		
Turn-Off Delay Time	$t_{d(off)}$			495		
Fall Time	t_f			170		
Energy Dissipation During Turn-on Time	E_{on}			26.5		mJ
Energy Dissipation During Turn-off Time	E_{off}			31.4		
Turn-On Delay Time	$t_{d(on)}$	V_{CE}=600V, I_C=300A, V_{GE}=±15V, R_G=1.8Ω, Tvj=150°C		191		ns
Rise Time	t_r			45		
Turn-Off Delay Time	$t_{d(off)}$			437		
Fall Time	t_f			112		
Energy Dissipation During Turn-on Time	E_{on}			29.3		mJ
Energy Dissipation During Turn-off Time	E_{off}			33.5		
SC data	I_{SC}	T_P≤10us, V_{GE}=15V, T_{vj}=150°C,V_{CC}=900,V_{CEM}≤1200V		1500		A

Electrical Characteristics of DIODE @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Diode DC Forward Current	I_F	T_C=100°C		300		A
Diode Peak Forward Current	I_{FRM}	t_P=1ms		600		A
Forward Voltage	V_F	I_F=300A, T_{vj}=25°C		2.1		V
		I_F=300A, T_{vj}=125°C		2.15		
		I_F=300A, T_{vj}=150°C		2.17		
Recovered Charge	Q_{rr}	V_R=600V, I_F=300A, $-di_F/dt$=6500A/us, T_{vj}=25°C		34.0		uC
Peak Revere Recovery Current	I_{rr}			375		A
Reverse Recovery Energy	E_{rec}			16.0		mJ
Recovered Charge	Q_{rr}	V_R=600V, I_F=300A, $-di_F/dt$=6500A/us, T_{vj}=125°C		54.0		uC
Peak Revere Recovery Current	I_{rr}			410		A
Reverse Recovery Energy	E_{rec}			27.4		mJ
Recovered Charge	Q_{rr}	V_R=600V, I_F=300A, $-di_F/dt$=6500A/us, T_{vj}=150°C		58		uC
Peak Revere Recovery Current	I_{rr}			416		A
Reverse Recovery Energy	E_{rec}			29.2		mJ

Curve Characteristics

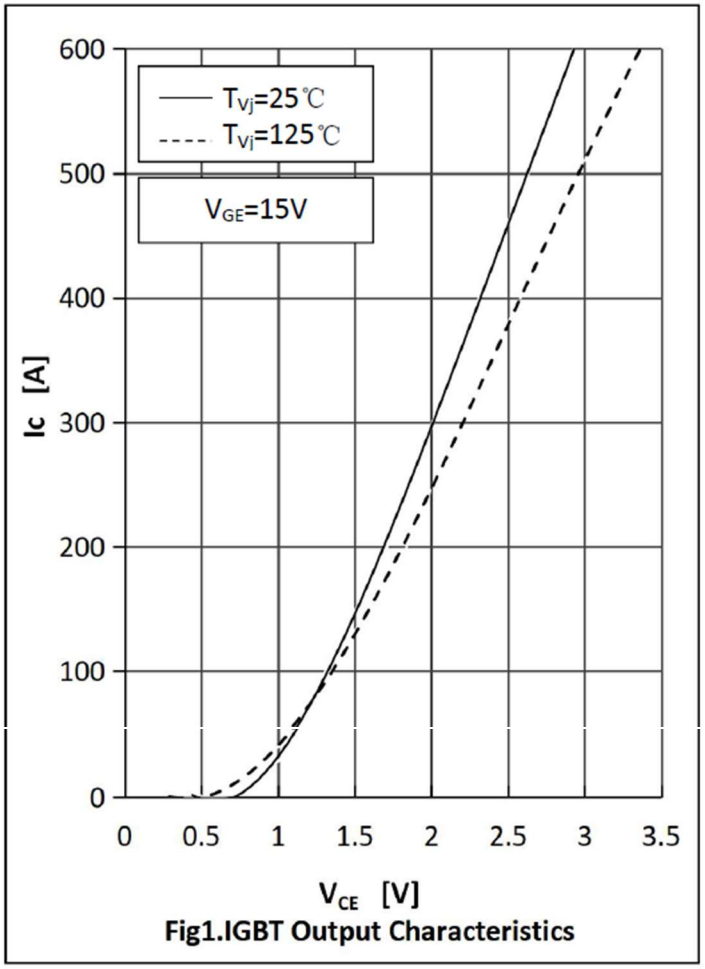


Fig1.IGBT Output Characteristics

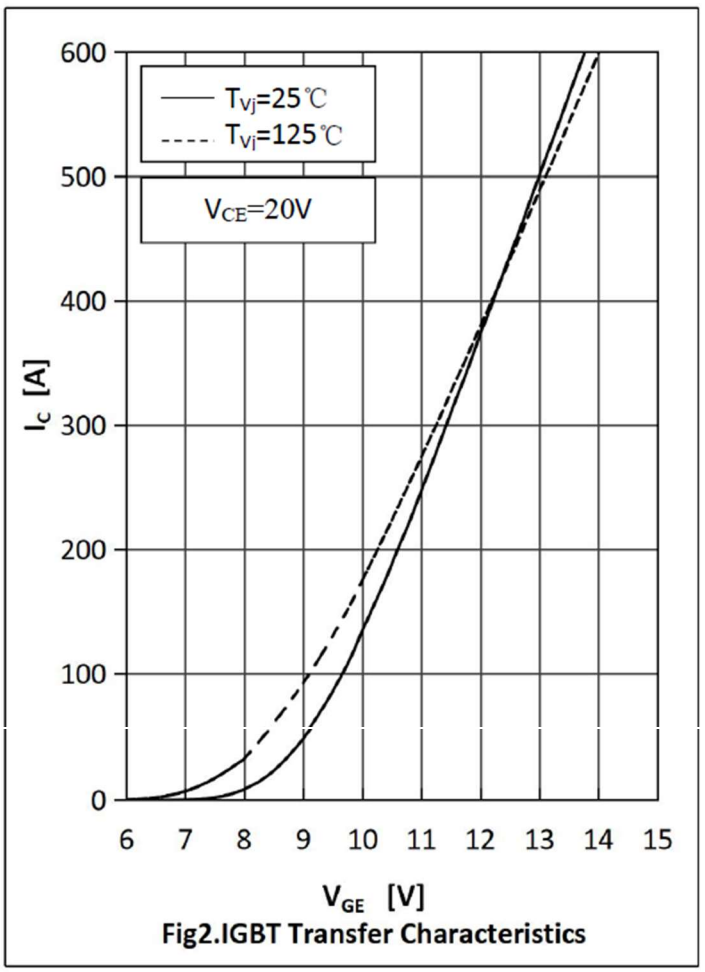


Fig2.IGBT Transfer Characteristics

Curve Characteristics

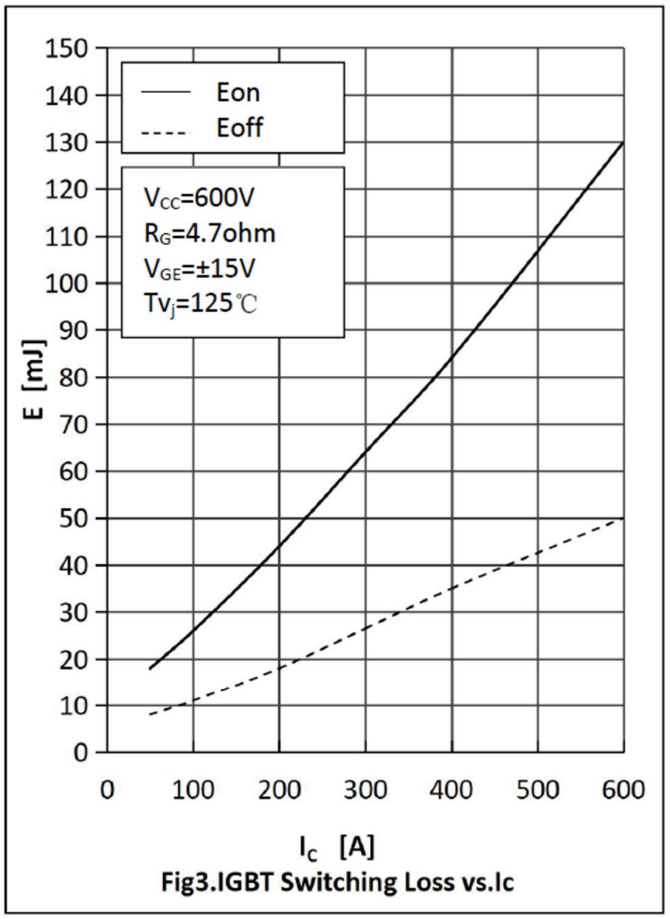


Fig3.IGBT Switching Loss vs.Ic

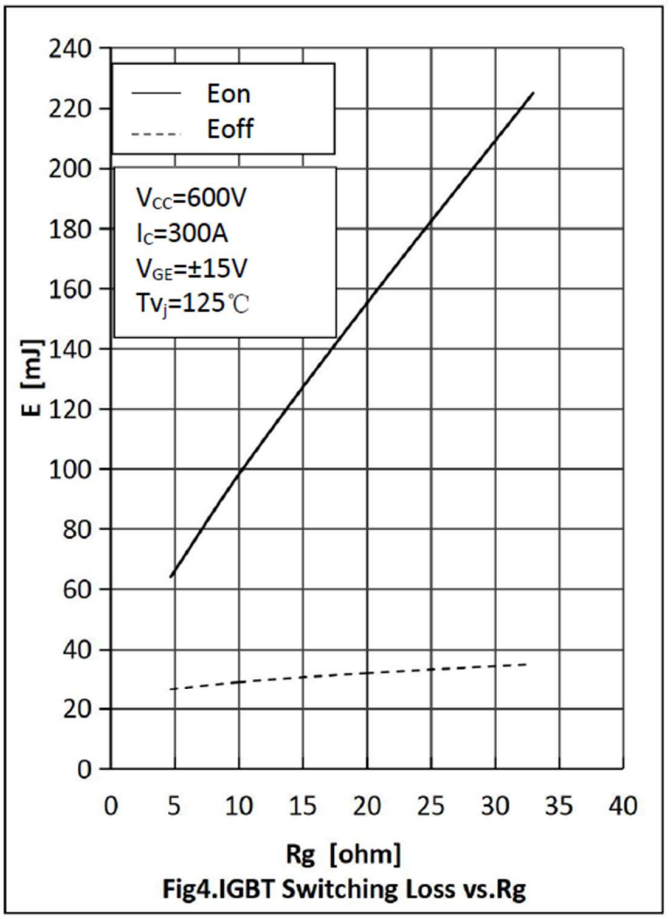


Fig4.IGBT Switching Loss vs.Rg

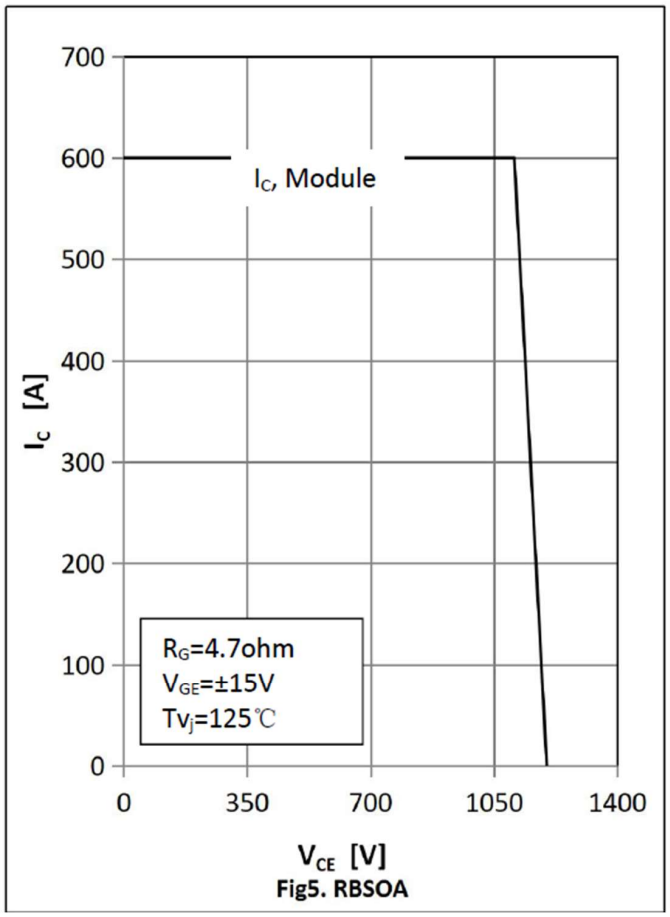


Fig5. RBSOA

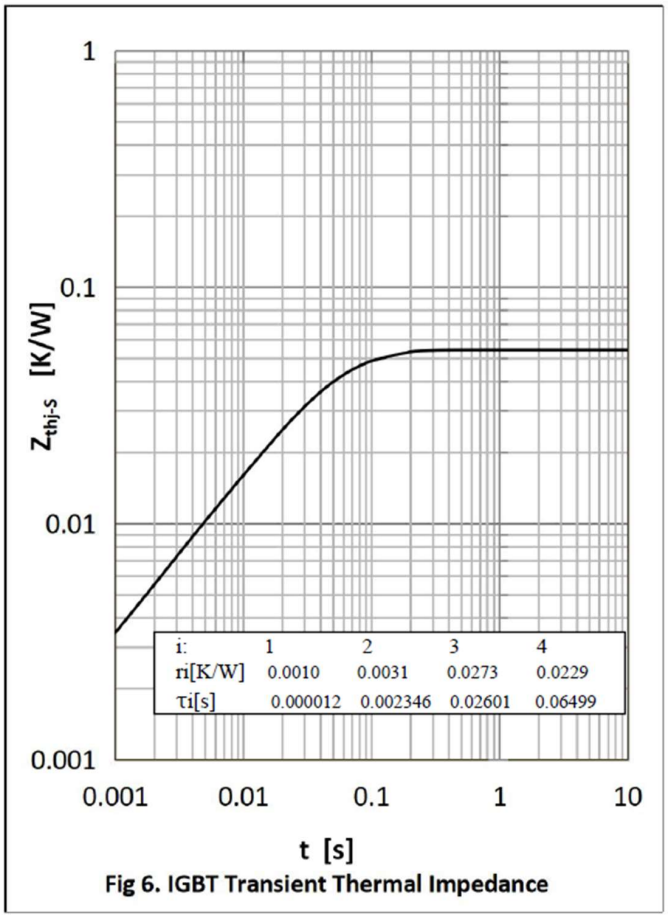


Fig 6. IGBT Transient Thermal Impedance

Curve Characteristics

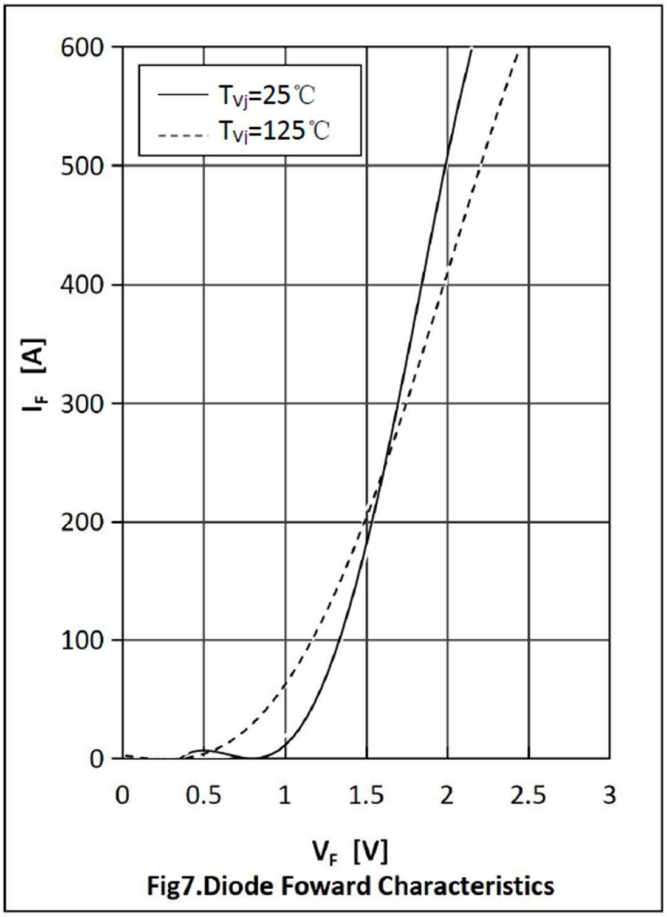


Fig7.Diode Foward Characteristics

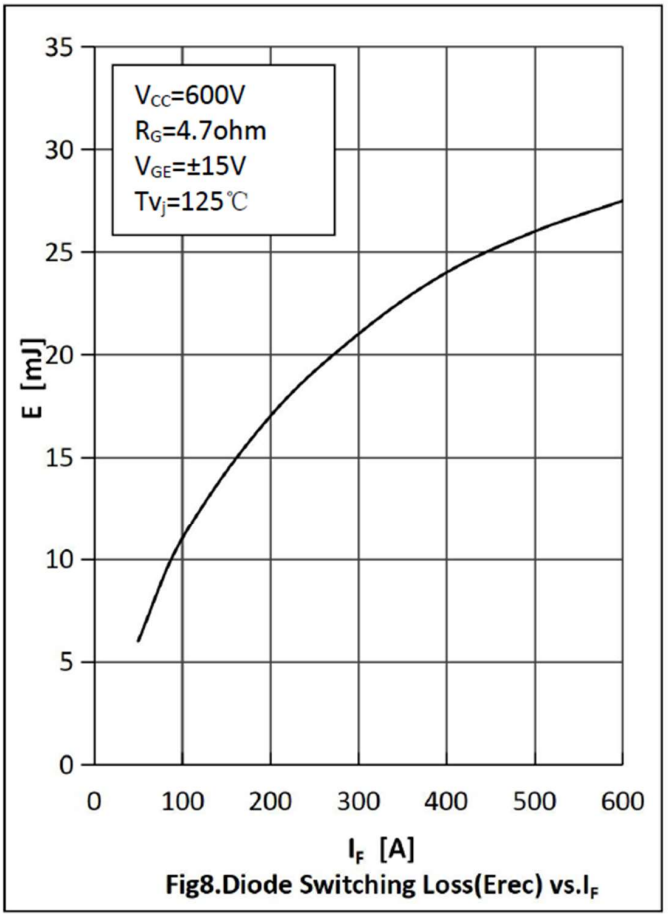


Fig8.Diode Switching Loss(Erec) vs.I_F

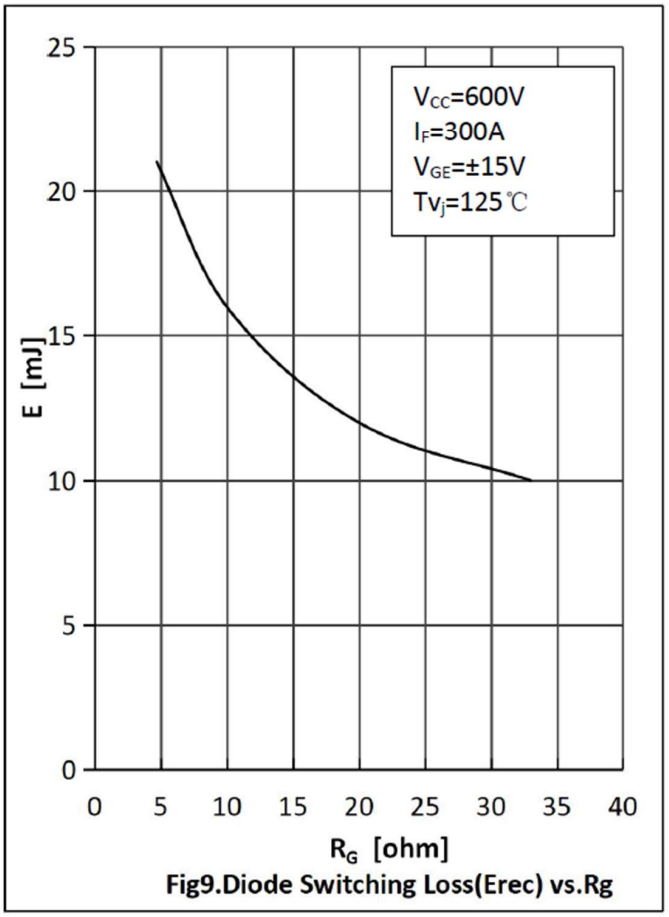


Fig9.Diode Switching Loss(Erec) vs.Rg

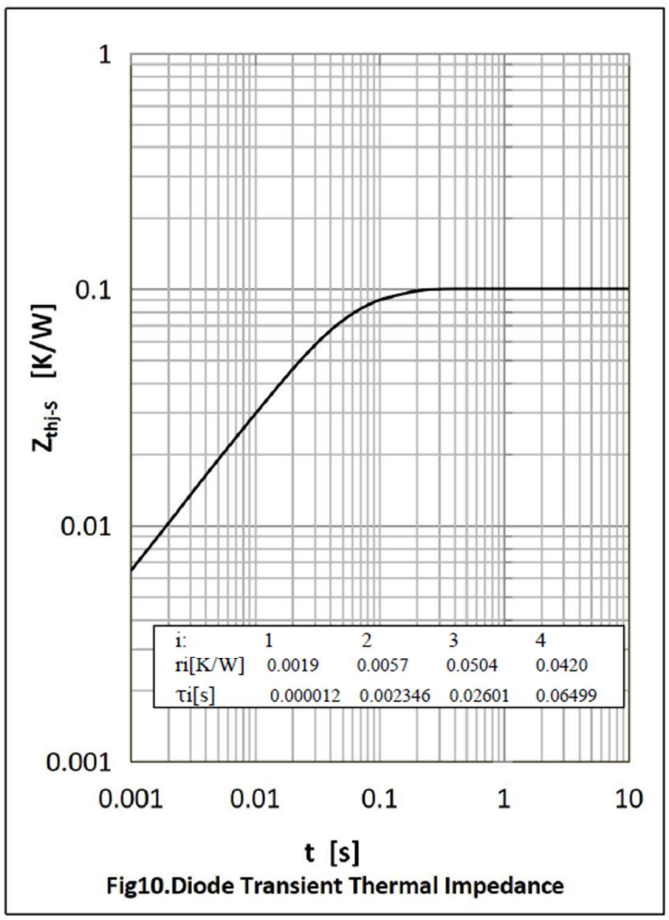


Fig10.Diode Transient Thermal Impedance

Package Dimensions

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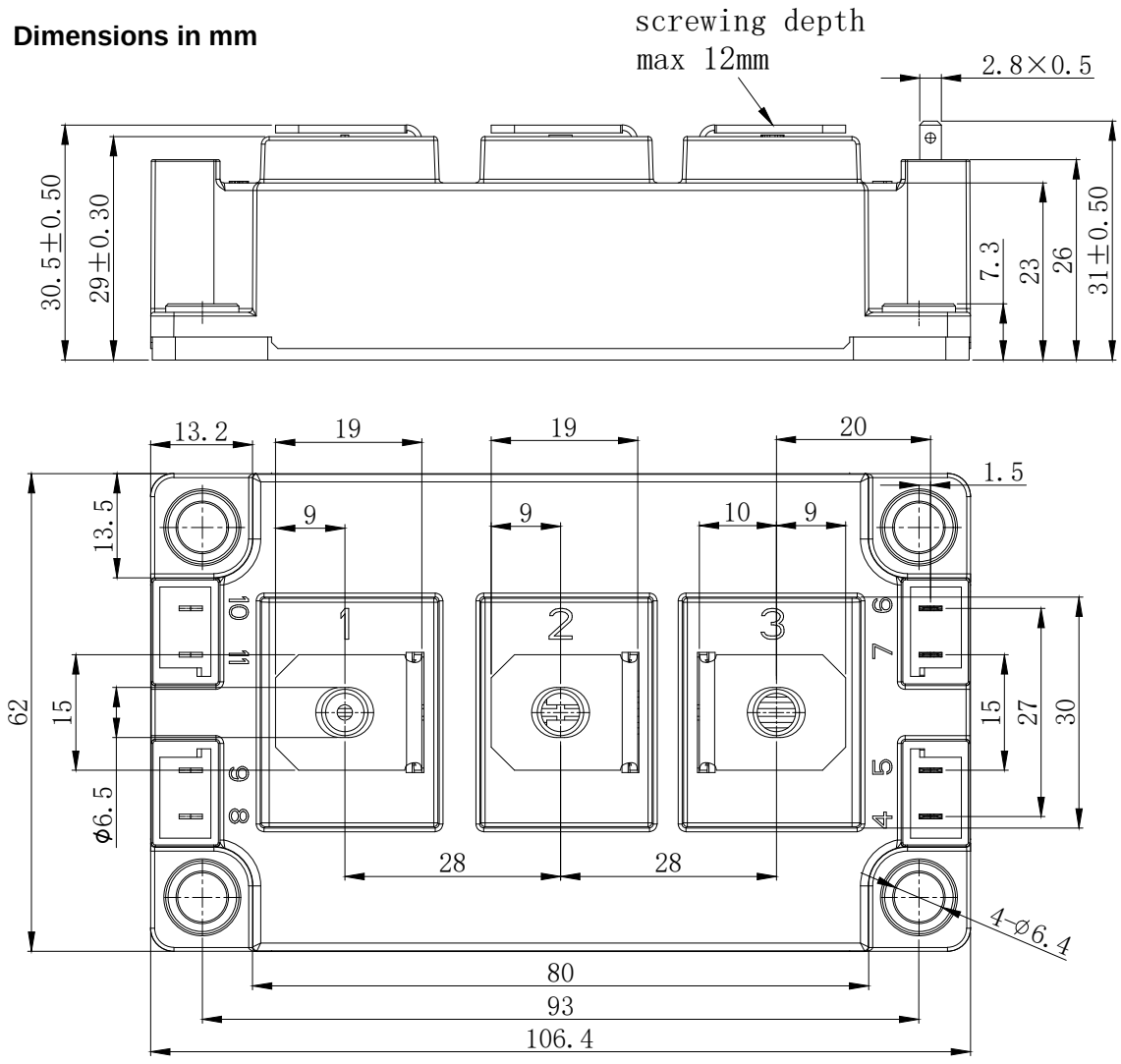
Dimensions in mm



Ordering Information

Device	Packing
Part Number-BP	Bulk: 8pcs/Box ; 48pcs/Ctn

单击下面可查看定价，库存，交付和生命周期等信息

>>MCC(美微科)