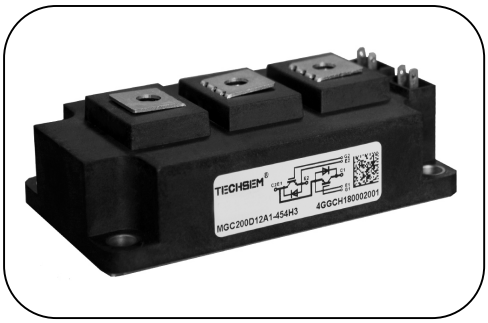


Features：

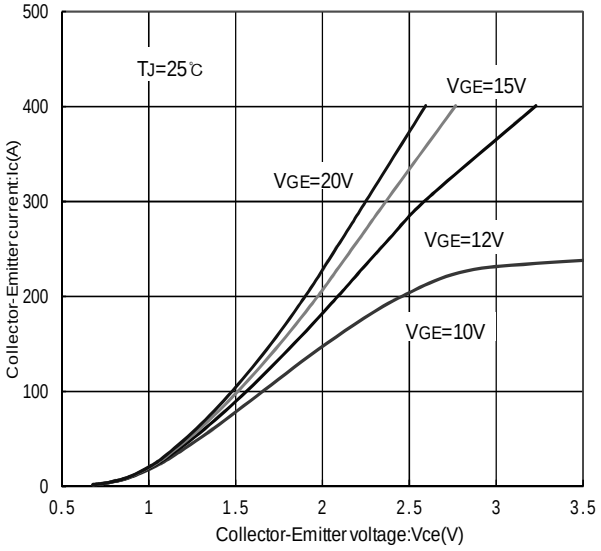
- **n** High speed switching
- **n** Voltage drive
- **n** Low inductance module structure

Typical Applications：

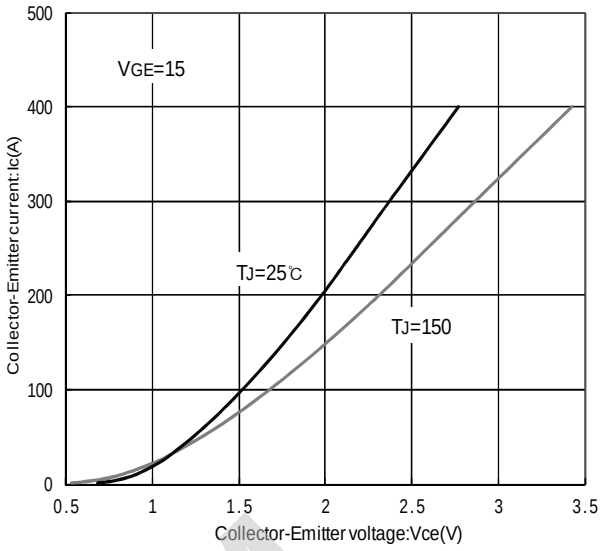
- **n** Inverter for Motor Drive
- **n** Inverter welding machines
- **n** Uninterruptible Power Supply
- **n** Industrial machines

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VALUE			UNIT
			Min	Type	Max	
V_{CES}	Collector-Emitter voltage	T_j=25°C			1250	V
V_{GES}	Gate-Emitter voltage	T_j=25°C			±30	V
I_C	Collector current	Continuous@ T_C=100°C			200	A
I_{CP}		T_P= 1ms			400	A
P_C	Collector power dissipation	T_j=175°C ,1 device			882	W
T_j	Junction temperature	/			175	℃
T_{stg}	Storage temperature	/	-40		125	℃
V_{iso}	Isolation between terminal and copper base	T_j=25°C , AC：1minute	2500			V
Screw torque	Mounting(M6)	/	4.5		6.0	N·m
	Terminals(M6)	/	4.5		6.0	N·m
I_{CES}	Zero gate voltage collector current	T_j=25°C ,V_{CE}=1200V，V_{GE}=0V			1.0	mA
I_{GES}	Gate-Emitter leakage current	T_j=25°C ,V_{CE}=0V，V_{GE}=±20V			±2	μA
$V_{GE(th)}$	Gate-Emitter threshold voltage	T_j=25°C ,V_{CE}=20V，I_C=150mA	4.5		8.5	V
$V_{CE(sat)}$	Collector-Emitter saturation voltage	T_j=25°C ,V_{GE}=15V，I_C=200A		1.96	2.5	V
		T_j=125°C ,V_{GE}=15V，I_C=200A		2.25		V
		T_j=150°C ,V_{GE}=15V，I_C=200A		2.33		V
C_{ies}	Input capacitance	T_j=25°C ,V_{CE}=10V，V_{GE}=0V，f=1MHz		22.2		nF
t_{on}	Turn-on time	T_j=150°C ,V_{CC}=600V，I_C=200A，V_{GE}=±15V，R_g=5.1Ω，Inductive load		180		ns
t_r				95		ns
t_{off}	Turn-off time			730		ns
t_f				270		ns
Eon	Turn-on energy			17		mJ
Eoff	Turn-off energy			20		mJ
E_{rr}	Reverse recovery energy			15		mJ
tsc	Short circuit withstand time	T_j=150°C ,V_{CC}=720V,V_{GE}=±15V，R_g=5.1Ω	10			μs
V_F	Forward on voltage	T_j=25°C ,I_F=200A		2.28	2.6	V
		T_j=125°C ,I_F=200A		2.26		V
		T_j=150°C ,I_F=200A		2.30		V
t_{rr}	Reverse recovery time	T_j=125°C ,I_F=200A		220		ns
		T_j=150°C ,I_F=200A		250		ns
$R_{th(j-c)}$	Thermal resistance(per chip)	IGBT			0.17	℃/W
		FWD			0.26	℃/W
$R_{th(c-f)}$	Contact thermal resistance (per module)	With thermal compound		0.01		℃/W
W_t	Weight				310	g
Outline	454H3					

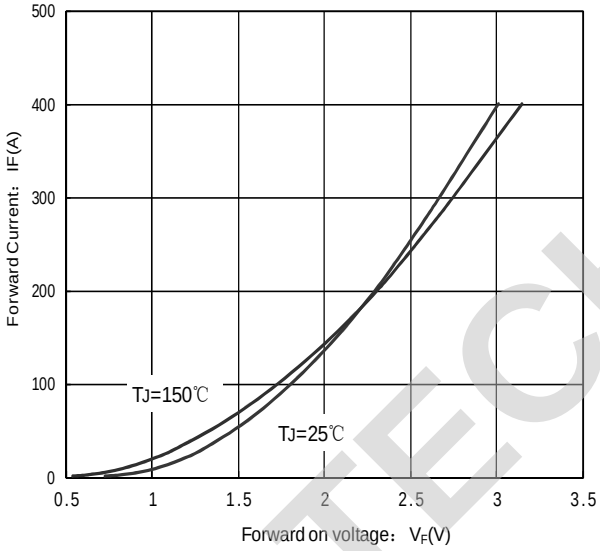
Collector current VS.Collector-Emitter voltage



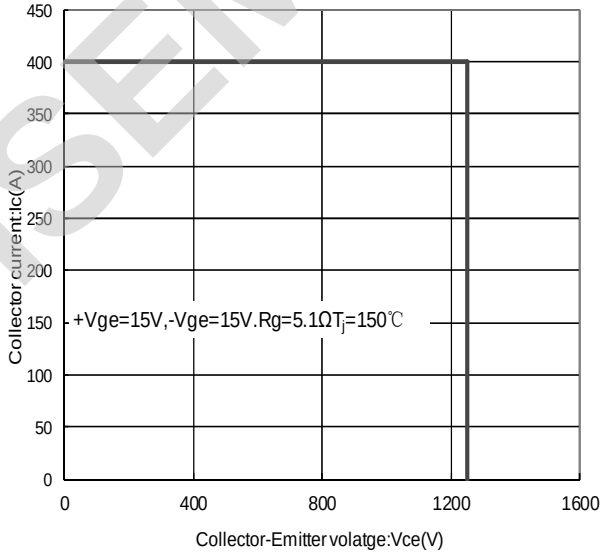
Collector current VS.Collector-Emitter voltage



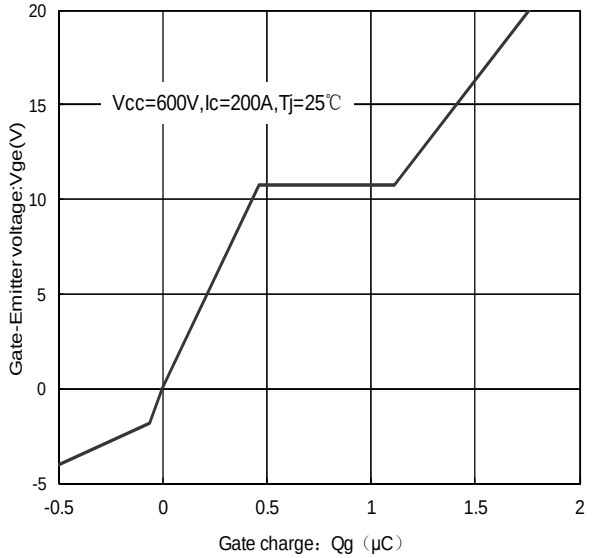
Forward Current VS. Forward Voltage



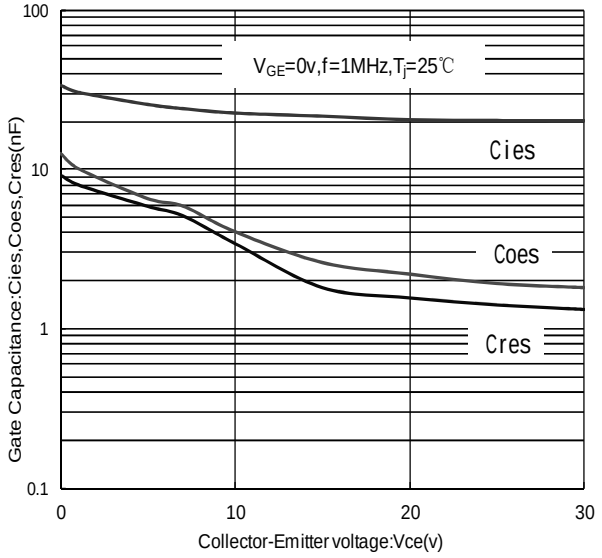
Reverse bias safe operating area



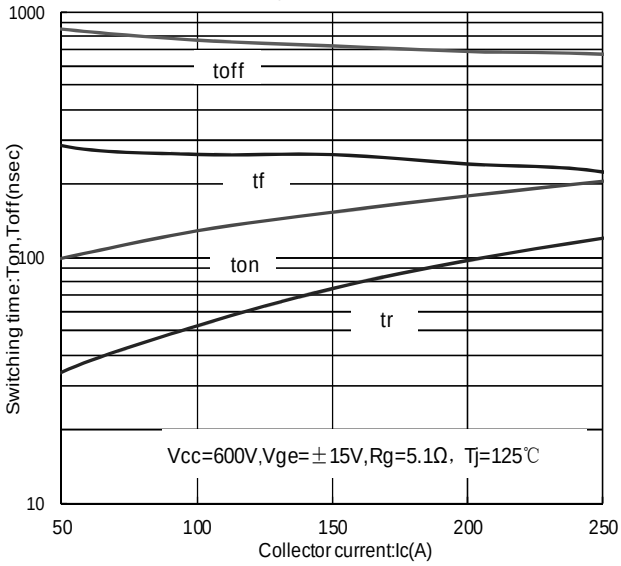
Dynamic Gate Charge(type)



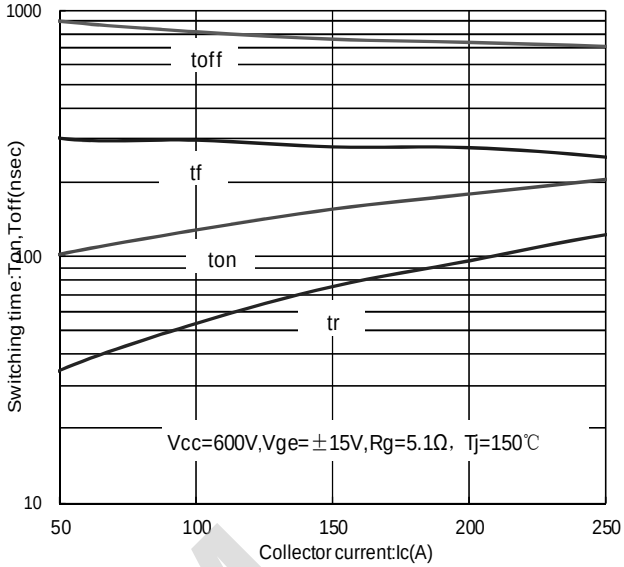
Gate Capacitance vs.Collector-Emitter Voltage



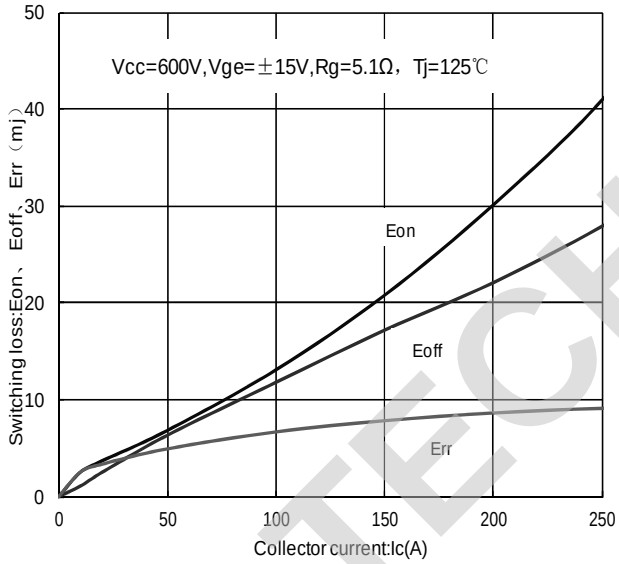
Switching time vs.Collector current



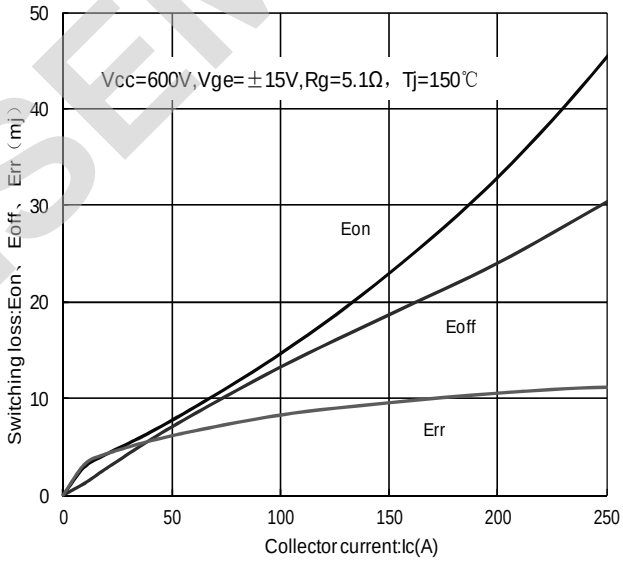
Switching time vs.Collector current



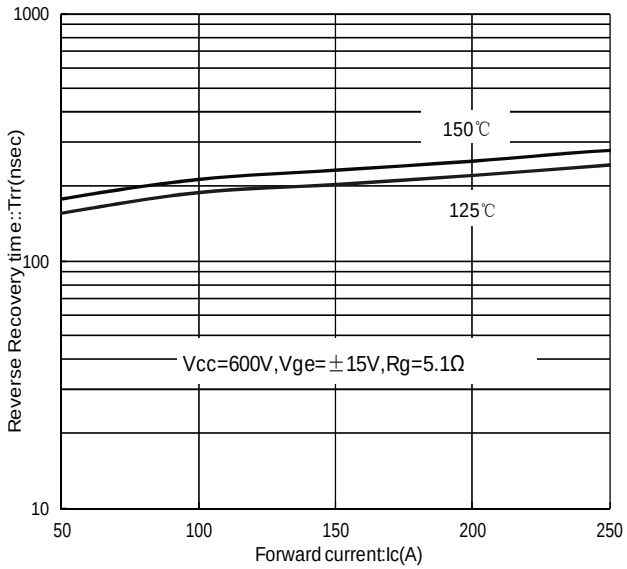
Switching loss vs.Collector current



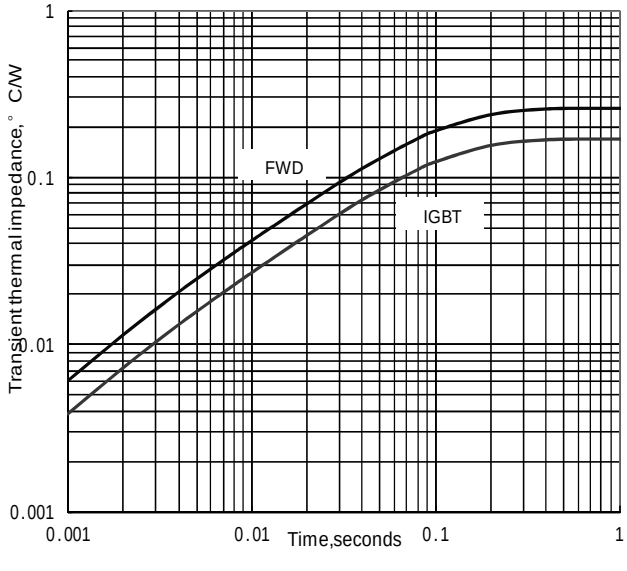
Switching loss vs.Collector current



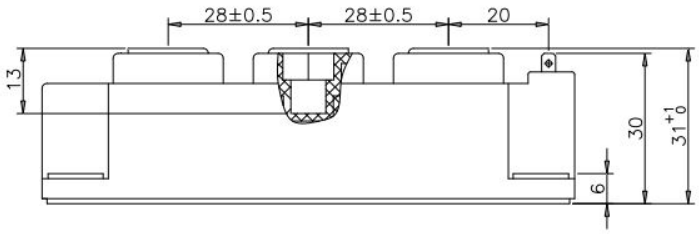
Reverse Recovery time vs.Collector current

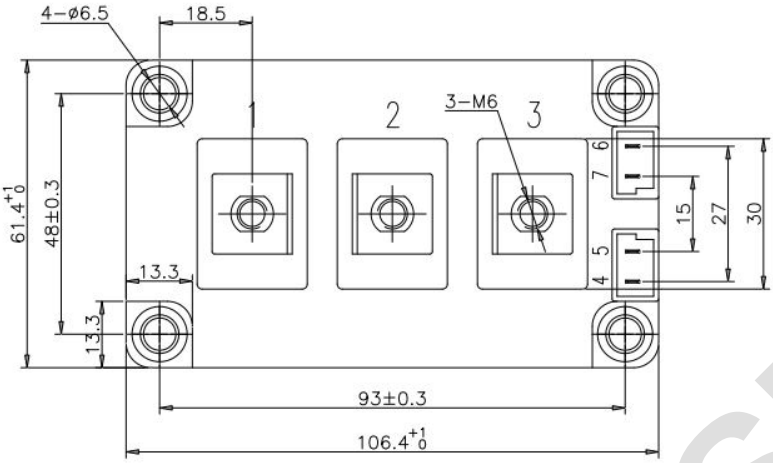


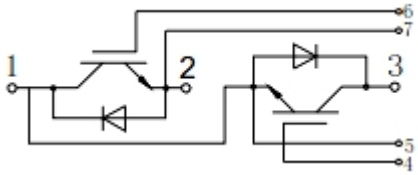
Max. junction to case thermai impedance



Outline & Circuit Diagram







Unmarked dimensional tolerance：±0.5mm

TECHSEM reserves the right to change specifications without notice.