

Features:

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

Typical Applications:

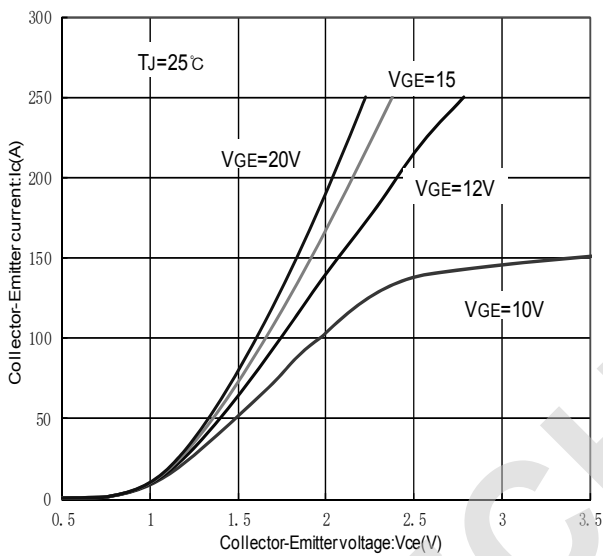
- Inverter for Motor Drive
- AC and DC Servo Drive Amplifier
- Uninterruptible Power Supply
- Industrial machines

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			150	A
I _{CP}		T _j =25°C , 1ms			300	A
P _c	Collector power dissipation	T _j =150°C , 1 device			595	W
T _j	Junction temperature	/			175	°C
T _{stg}	Storage temperature	/	-40		125	°C
V _{iso}	Isolation between terminal and copper base	T _j =25°C , AC: 1minute	2500			V
Screw torque	Mounting(M5)	/	2.5	3.5	4.5	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	6.5	8.5	V
V _{CE(sat)}	Collector-Emitter saturation voltage	T _j =25°C , V _{GE} =15V, I _c =150A		1.80	2.4	V
		T _j =125°C , V _{GE} =15V, I _c =150A		1.95		V
		T _j =150°C , V _{GE} =15V, I _c =150A		2.25		V
C _{ies}	Input capacitance	T _j =25°C , V _{CE} =10V, V _{GE} =0V, f=1MHz		12.6		nF
t _{on}	Turn-on time	T _j =150°C , V _{CC} =600V, I _c =150A, V _{GE} =±15V, R _G =6.8Ω, Inductive load		160		ns
t _r				50		ns
t _{off}				680		ns
t _f				250		ns
t _{sc}	Short circuit withstand time	T _j =150°C , V _{CC} =720V, V _{GE} =±15V, R _G =6.8 Ω	10			μs
V _F	Forward on voltage	T _j =25°C , I _F =150A		2.10	2.60	V
		T _j =125°C , I _F =150A		2.00		V
		T _j =150°C , I _F =150A		1.90		V
t _{rr}	Reverse recovery time	T _j =125°C , I _F =150A		150		ns
		T _j =150°C , I _F =150A		160		
R _{th(j-c)}	Thermal resistance(1 device)	IGBT			0.20	°C/W
		FWD			0.30	°C/W
R _{th(c-f)}	Contact thermal resistance (1 device)	With thermal compound		0.050		°C/W
W _t	Weight				290	g
Outline	453H5					

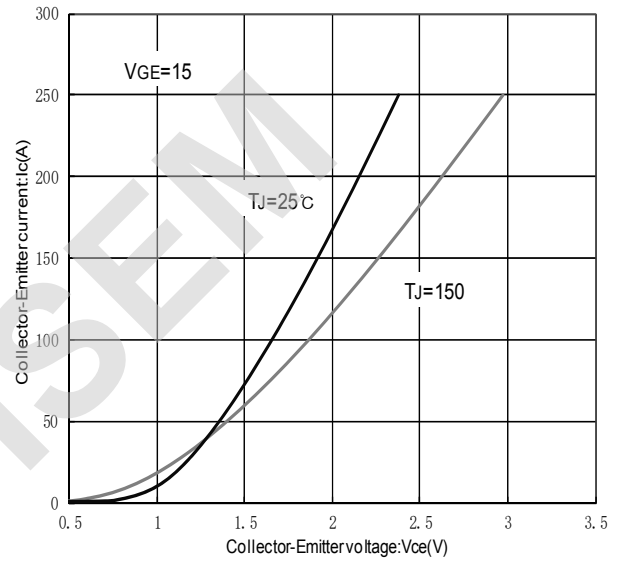
NTC-Thermistor Characteristic Values

SYMBOL	CHARACTERISTIC	TEST CONDITIONS	VALUE			UNIT
			Min	Type	Max	
R ₂₅	Rated resistance	T _c =25°C		5.00		kΩ
Δ R/R	Deviation of R100	T _c =100°C ,R ₁₀₀ =493Ω	-5		5	%
P ₂₅	Power dissipation	T _c =25°C			20.0	mW
B _{25/50}	B-value	$R_2=R_{25}\text{Exp}[B_{25/50}(1/T_2-1/(298.15\text{ K}))]$		3375		K

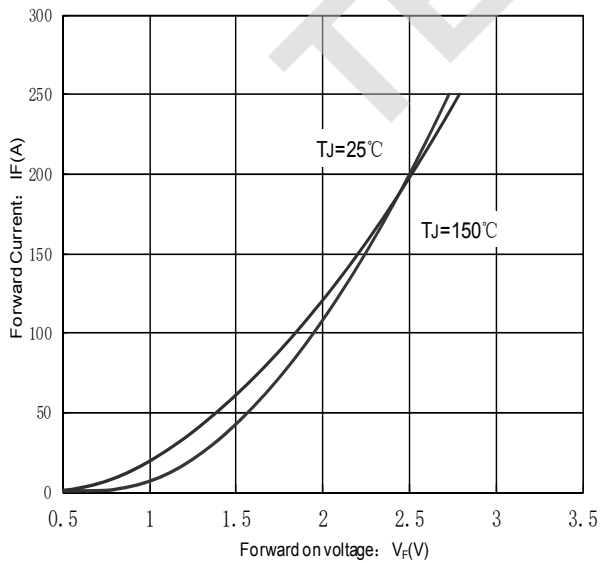
Collector current VS. Collector-Emitter voltage



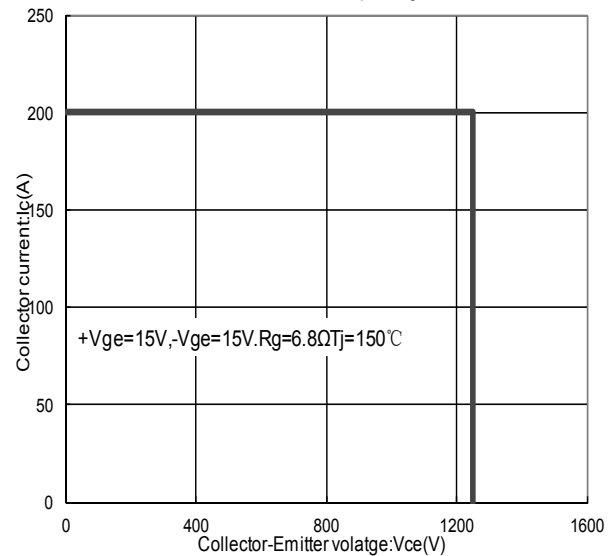
Collector current VS. Collector-Emitter voltage

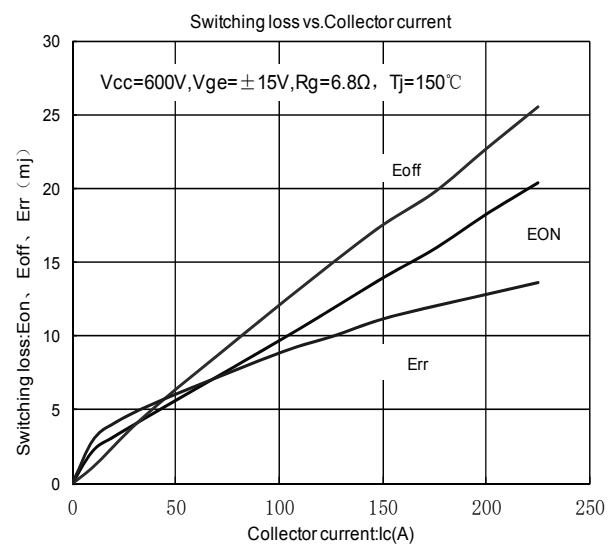
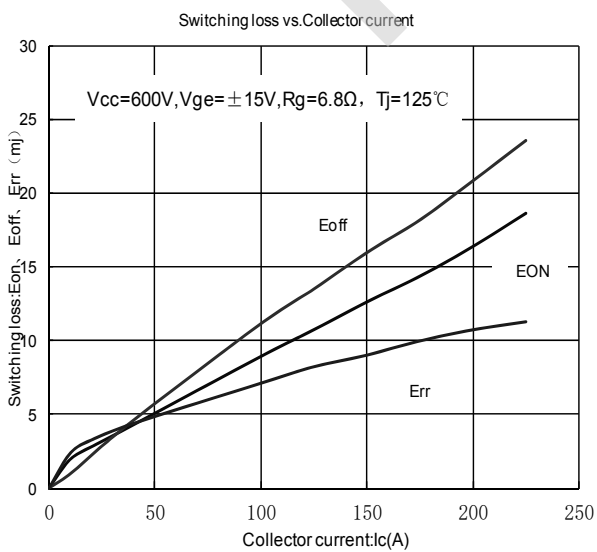
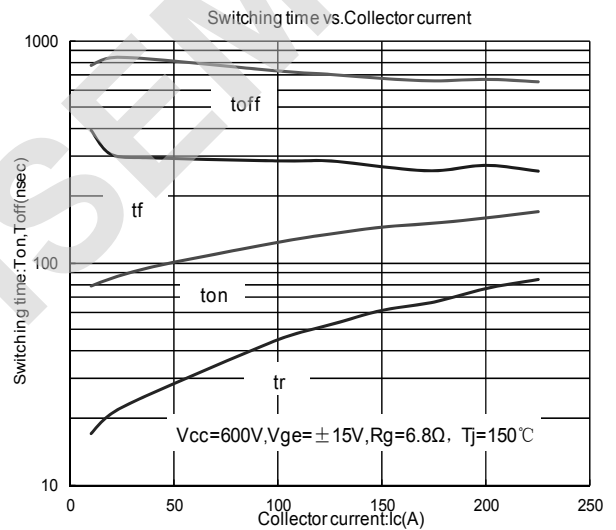
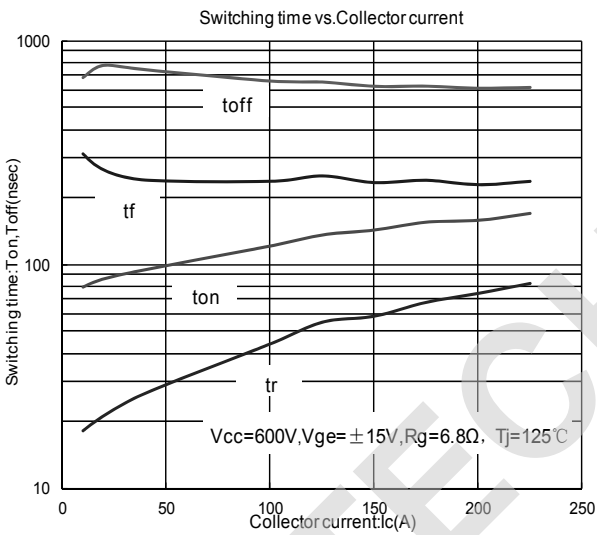
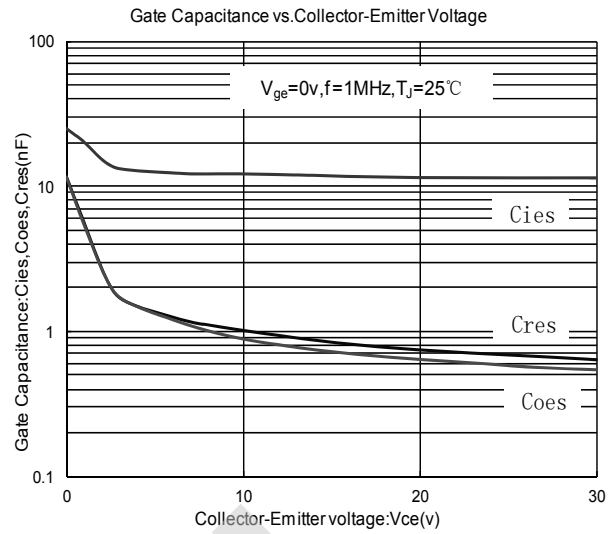
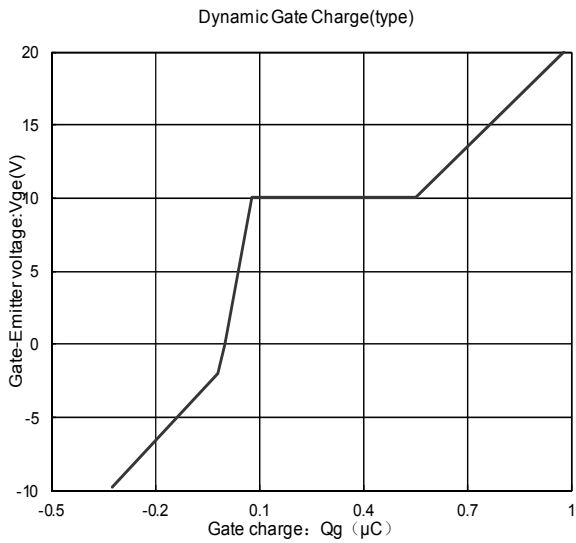


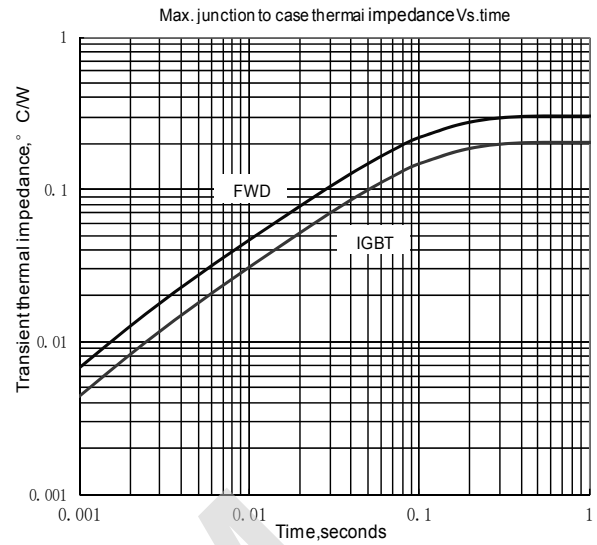
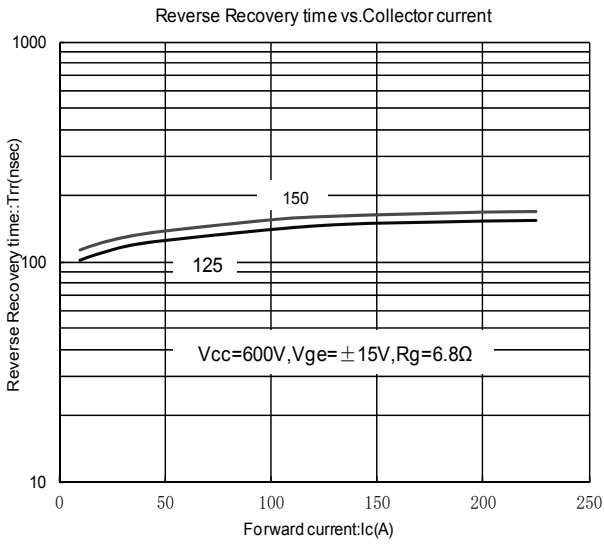
Forward Current VS. Forward Voltage



Reverse bias safe operating area







Outline & Circuit Diagram

