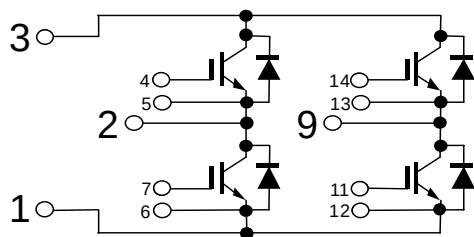
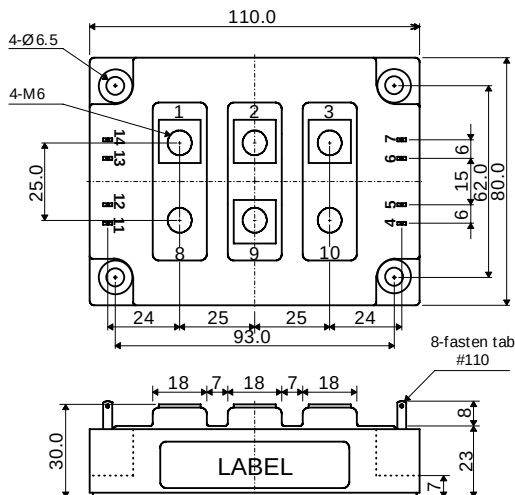


☐ 回路図 : **CIRCUIT**

☐ 外形寸法図 : **OUTLINE DRAWING**


Dimension: [mm]

☐ 最大定格 : **MAXIMUM RATINGS** (at $T_c=25^\circ\text{C}$ unless otherwise specified)

Item	Symbol	Rated Value	Unit
コレクタ・エミッタ間電圧 Collector-Emitter Voltage	V_{CES}	1,200	V
ゲート・エミッタ間電圧 Gate-Emitter Voltage	V_{GES}	± 20	V
コレクタ電流 Collector Current	DC	150	A
	1ms	300	
コレクタ損失 Collector Power Dissipation	P_c	780	W
接合温度 Junction Temperature Range	T_j	$-40 \sim +150$	$^\circ\text{C}$
保存温度 Storage Temperature Range	T_{stg}	$-40 \sim +125$	$^\circ\text{C}$
絶縁耐圧 (Terminal to Base AC, 1minute) Isolation Voltage	V_{iso}	2,500	V (RMS)
締め付けトルク Mounting Torque	Module Base to Heatsink	3 (30.6)	N·m (kgf·cm)
	Busbar to Main Terminal		

☐ 電気的特性 : **ELECTRICAL CHARACTERISTICS** (at $T_j=25^\circ\text{C}$ unless otherwise specified)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
コレクタ遮断電流 Collector-Emitter Cut-Off Current	I_{CES}	$V_{CE}=1200\text{V}, V_{GE}=0\text{V}$	—	—	3.0	mA
ゲート漏れ電流 Gate-Emitter Leakage Current	I_{GES}	$V_{GE}=\pm 20\text{V}, V_{CE}=0\text{V}$	—	—	1.0	μA
コレクタ・エミッタ間飽和電圧 Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=150\text{A}, V_{GE}=15\text{V}$	—	1.9	2.4	V
ゲートしきい値電圧 Gate-Emitter Threshold Voltage	$V_{GE(th)}$	$V_{CE}=5\text{V}, I_C=150\text{mA}$	4.0	—	8.0	V
入力容量 Input Capacitance	C_{ies}	$V_{CE}=10\text{V}, V_{GE}=0\text{V}, f=1\text{MHz}$	—	12,600	—	pF
スイッチング時間 Switching Time	上昇時間 Rise Time	$V_{CC}=600\text{V}$ $R_L=4.0\Omega$ $R_G=3.6\Omega$ $V_{GE}=\pm 15\text{V}$	—	0.25	0.45	μs
	ターンオン時間 Turn-on Time		—	0.40	0.70	
	下降時間 Fall Time		—	0.25	0.35	
	ターンオフ時間 Turn-off Time		—	0.80	1.10	

☐ フリーホイールダイオードの特性 : **FREE WHEELING DIODE RATINGS & CHARACTERISTICS** (at $T_c=25^\circ\text{C}$) & **CHARACTERISTICS** (at $T_j=25^\circ\text{C}$)

Item	Symbol	Rated Value	Unit
順電流 Forward Current	DC	150	A
	1ms	300	

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
順電圧 Peak Forward Voltage	V_F	$I_F=150\text{A}, V_{GE}=0\text{V}$	—	1.9	2.4	V
逆回復時間 Reverse Recovery Time	t_{rr}	$I_F=150\text{A}, V_{GE}=-10\text{V}$ $di/dt=300\text{A}/\mu\text{s}$	—	0.2	0.3	μs

☐ 熱的特性 : **THERMAL CHARACTERISTICS**

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
熱抵抗 Thermal Impedance	IGBT	Junction to Case	—	—	0.16	$^\circ\text{C}/\text{W}$
	Diode		—	—	0.32	

Fig.1- Output Characteristics (Typical)

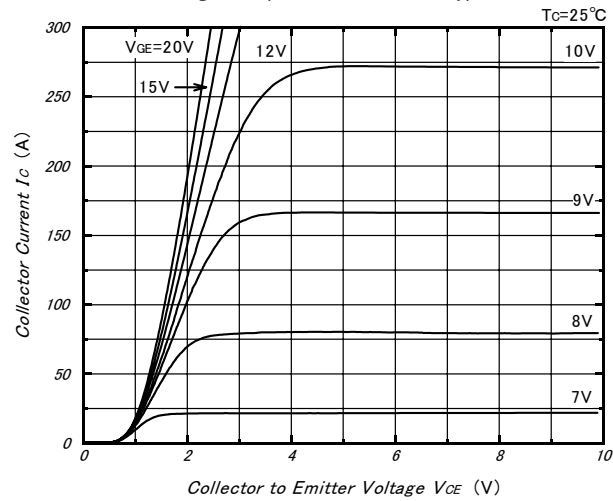


Fig.2- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

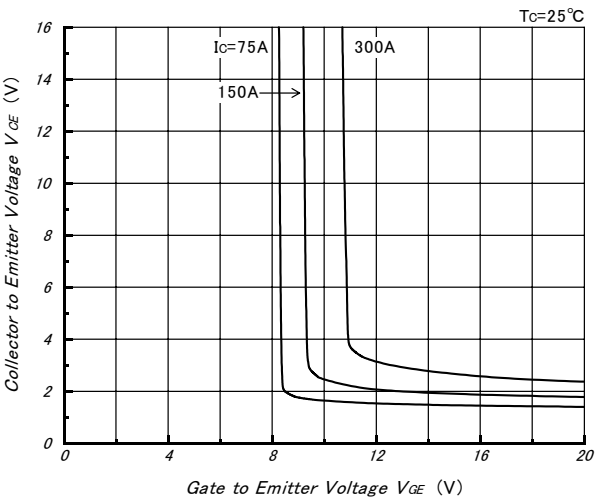


Fig.3- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

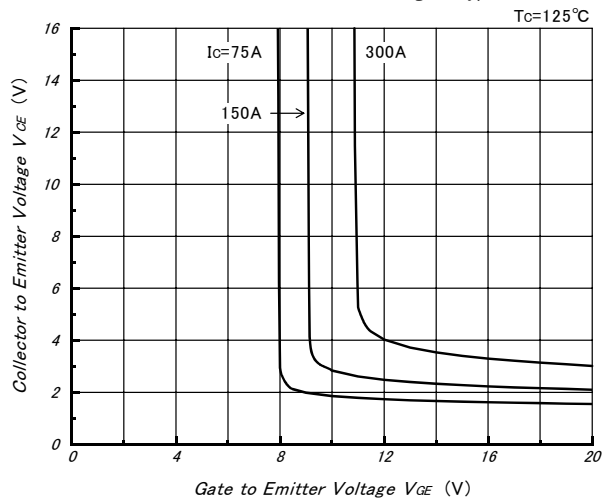


Fig.4- Gate Charge vs. Collector to Emitter Voltage (Typical)

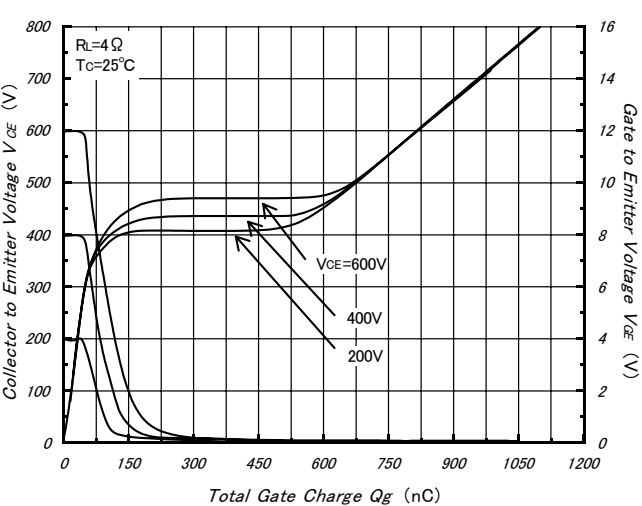


Fig.5- Capacitance vs. Collector to Emitter Voltage (Typical)

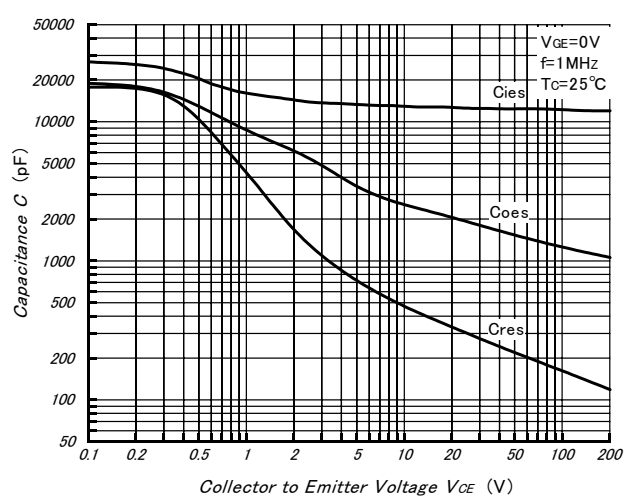


Fig.6- Collector Current vs. Switching Time (Typical)

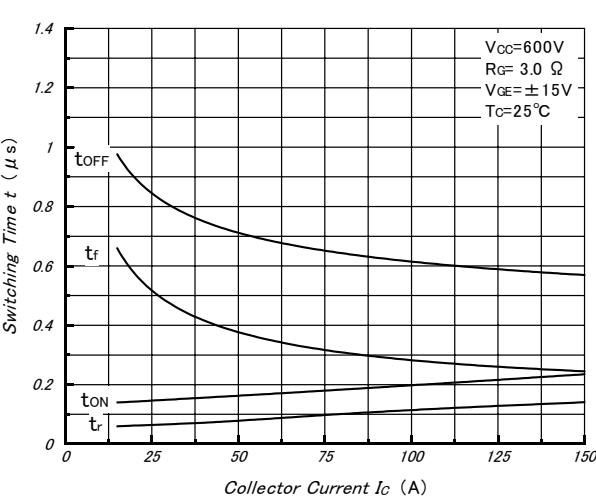


Fig.7- Series Gate Impedance vs. Switching Time (Typical)

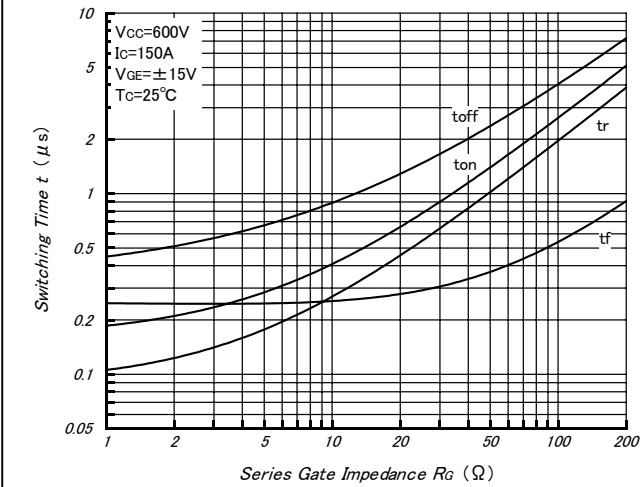


Fig.8- Forward Characteristics of Free Wheeling Diode (Typical)

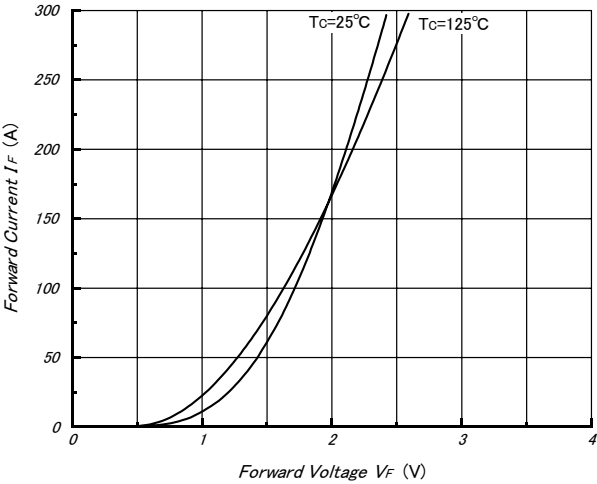


Fig.9- Reverse Recovery Characteristics (Typical)

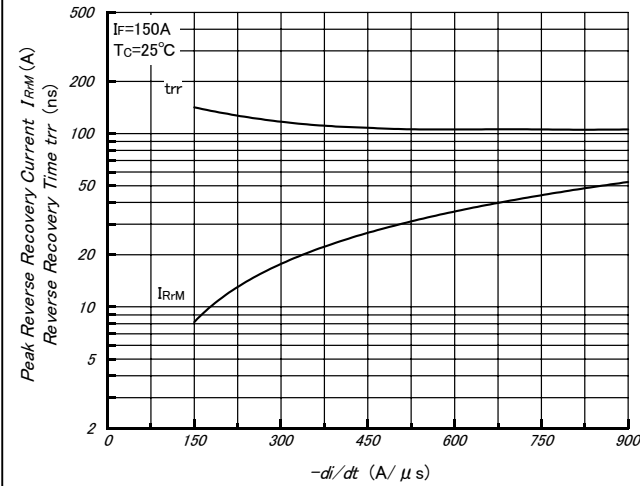


Fig.10- Reverse Bias Safe Operating Area (Typical)

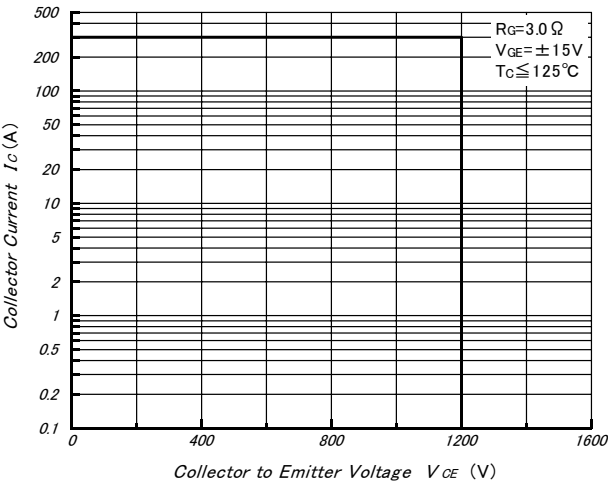


Fig.11- Transient Thermal Impedance

