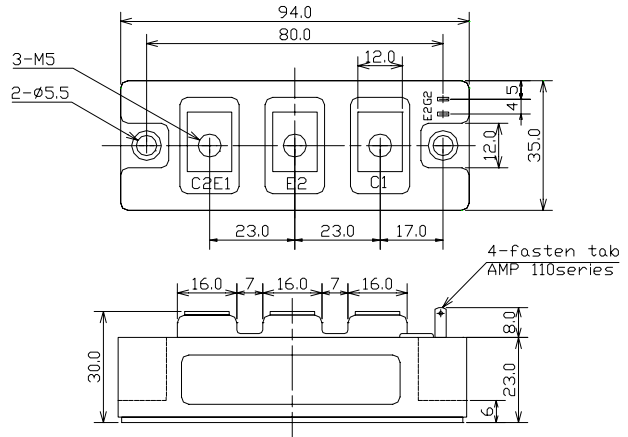
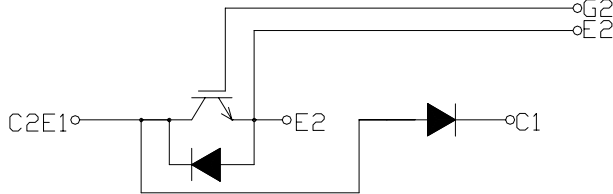


回路図 : *CIRCUIT*

外形寸法図 : *OUTLINE DRAWING*



Dimension: [ mm ]

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

重量 : 220 g

Item	Symbol	Rated Value	Unit
コレクタ・エミッタ間電圧 Collector-Emitter Voltage	$V_{CES}$	600	V
ゲート・エミッタ間電圧 Gate-Emitter Voltage	$V_{GES}$	$\pm 20$	V
コレクタ電流 Collector Current	DC $I_C$	50	A
	1 ms $I_{CP}$	100	
コレクタ損失 Collector Power Dissipation	$P_C$	250	W
接合温度 Junction Temperature Range	$T_j$	-40 ~ +150	$^\circ\text{C}$
保存温度 Storage Temperature Range	$T_{stg}$	-40 ~ +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	2 ( 20.4 )	N · m (kgf · cm)
	Busbar to Main Terminal		

電気的特性 : *ELECTRICAL CHARACTERISTICS* (  $T_c = 25^\circ\text{C}$  )

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
コレクタ遮断電流 Collector-Emitter Cut-Off Current	$I_{CES}$	$V_{CE} = 600V, V_{GE} = 0V$	-	-	1.0	mA
ゲート漏れ電流 Gate-Emitter Leakage Current	$I_{GES}$	$V_{GE} = \pm 20V, V_{CE} = 0V$	-	-	1.0	$\mu\text{A}$
コレクタ・エミッタ間飽和電圧 Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 50A, V_{GE} = 15V$	-	2.0	2.5	V
ゲートしきい値電圧 Gate-Emitter Threshold Voltage	$V_{GE(th)}$	$V_{CE} = 5V, I_C = 50mA$	4.0	-	8.0	V
入力容量 Input Capacitance	$C_{ies}$	$V_{CES} = 10V, V_{GE} = 0V, f = 1MHz$	-	5,000	-	pF
スイッチング時間 Switching Time	上昇時間 Rise Time $t_r$	$V_{CC} = 300V$ $R_L = 6\Omega$ $R_G = 15\Omega$ $V_{GE} = \pm 15V$	-	0.15	0.30	$\mu\text{s}$
	ターンオン時間 Turn-on Time $t_{on}$		-	0.25	0.40	
	下降時間 Fall Time $t_f$		-	0.20	0.35	
	ターンオフ時間 Turn-off Time $t_{off}$		-	0.45	0.70	

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

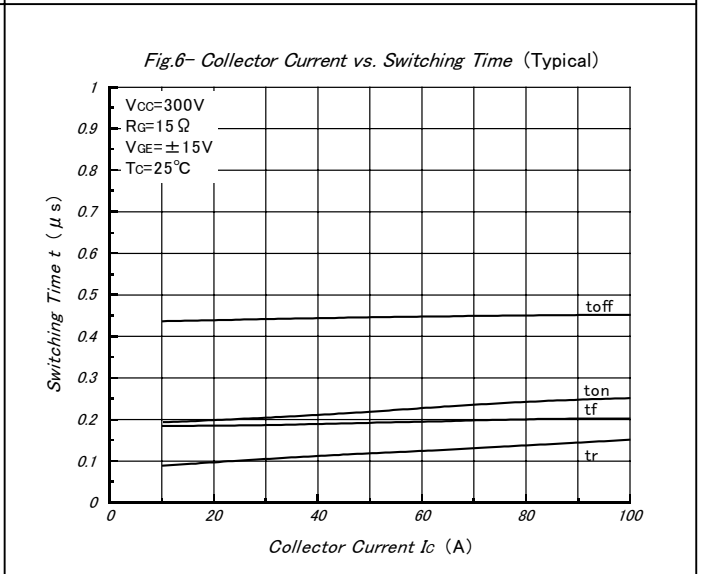
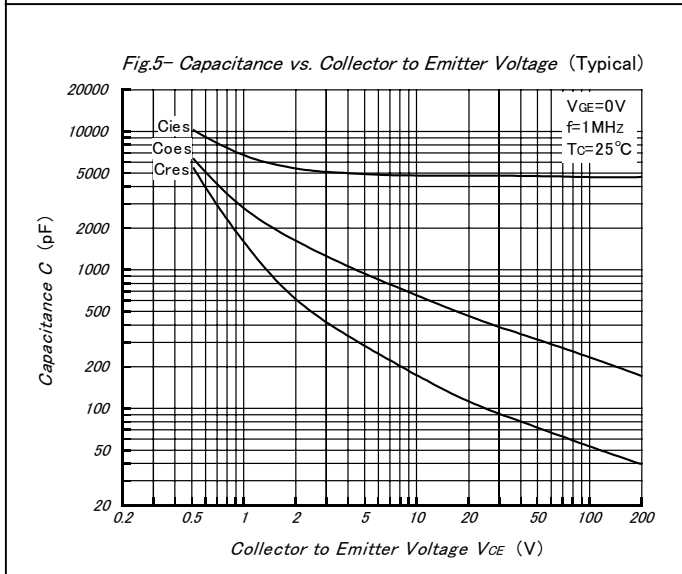
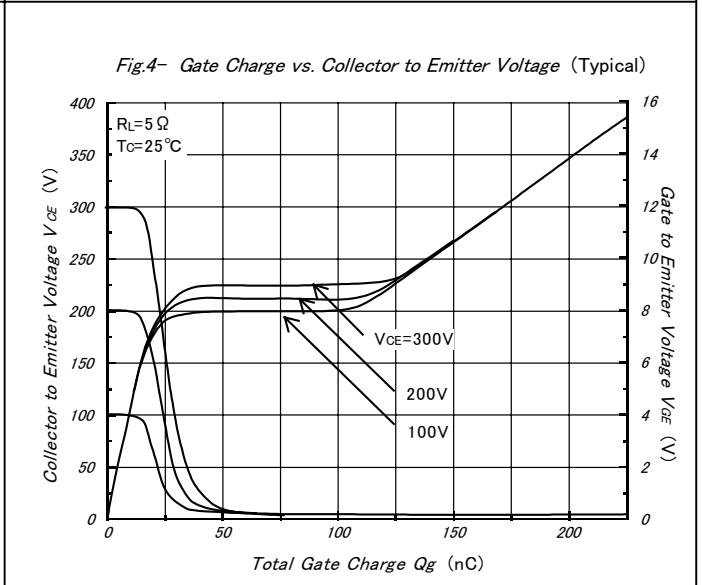
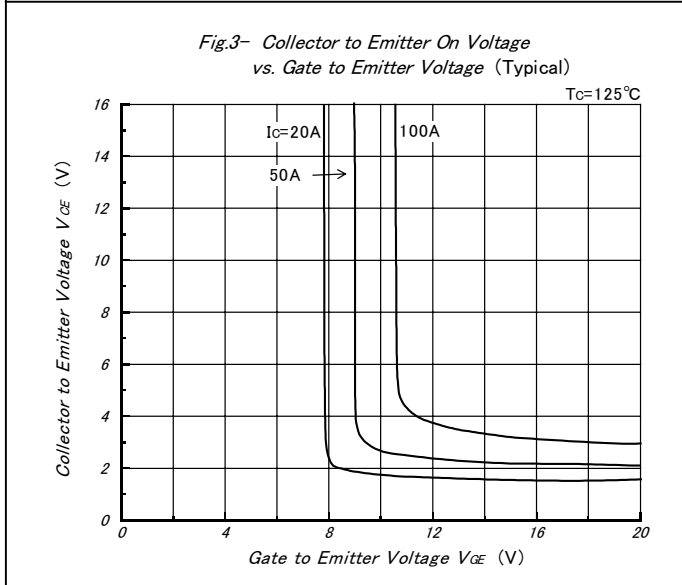
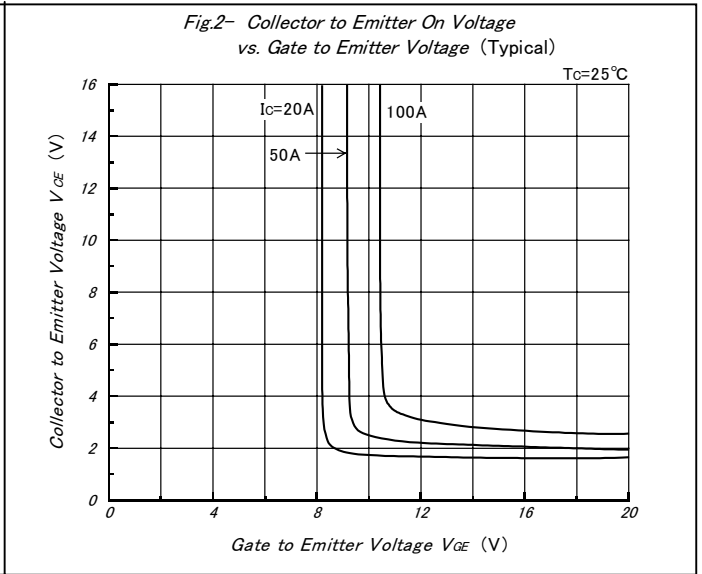
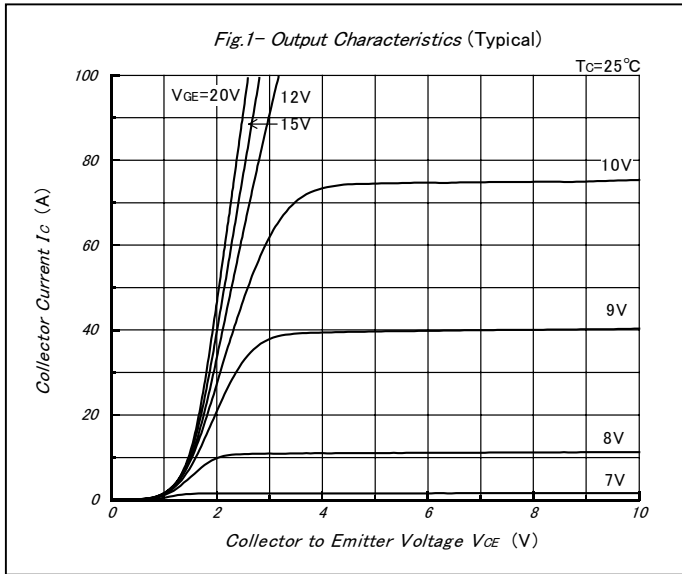
Item	Symbol	Rated Value	Unit
順電流 Forward Current	DC $I_F$	50	A
	1 ms $I_{FM}$	100	

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
順電圧 Peak Forward Voltage	$V_F$	$I_F = 50A, V_{GE} = 0V$	-	1.9	2.4	V
逆回復時間 Reverse Recovery Time	$t_{rr}$	$I_F = 50A, V_{GE} = -10V$ $di/dt = 50A/\mu\text{s}$	-	0.15	0.25	$\mu\text{s}$

熱的特性 : *THERMAL CHARACTERISTICS*

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
熱抵抗 Thermal Impedance	IGBT $R_{th(j-c)}$	Junction to Case	-	-	0.50	$^\circ\text{C}/\text{W}$
	Diode		-	-	1.00	

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

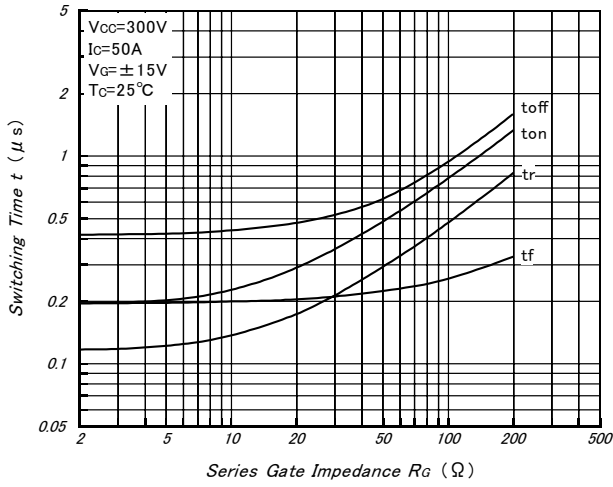


Fig.8- Forward Characteristics of Free Wheeling Diode (Typical)

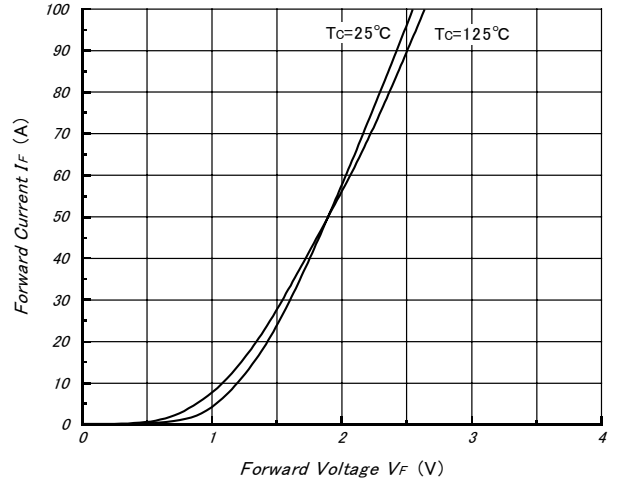


Fig.9- Reverse Recovery Characteristics (Typical)

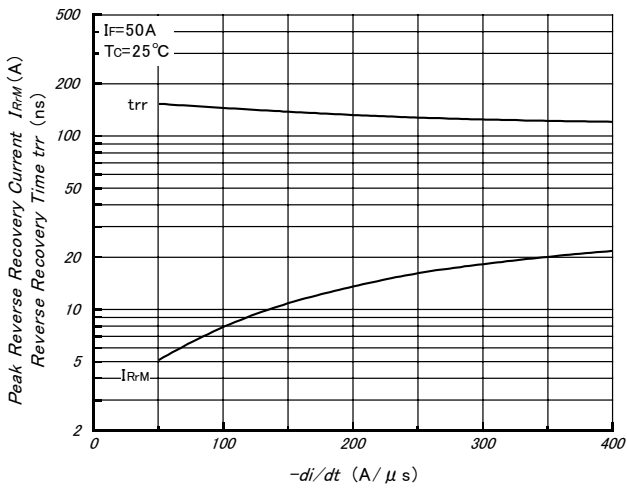


Fig.10- Reverse Bias Safe Operating Area (Typical)

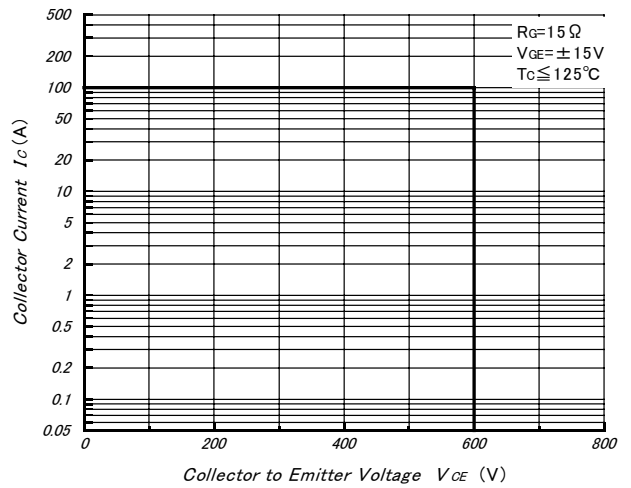


Fig.11- Transient Thermal Impedance

