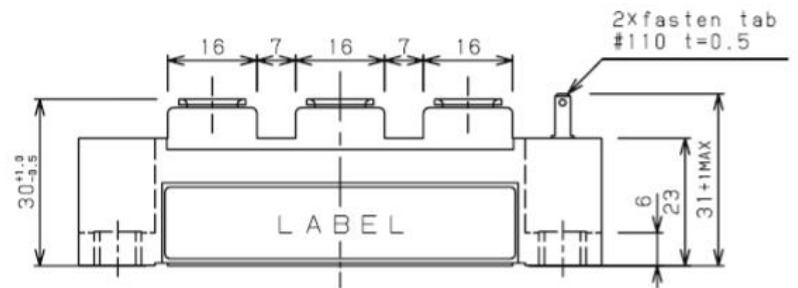
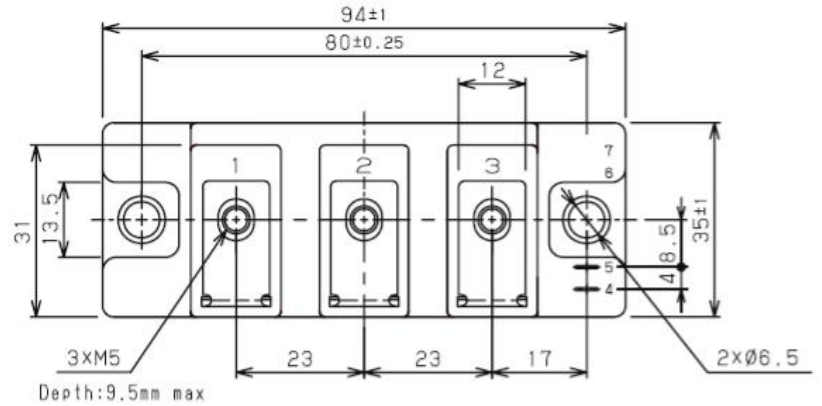
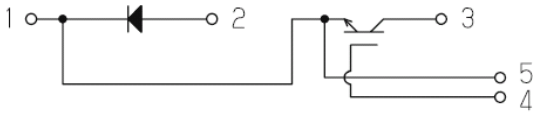


□ 回路図 : *CIRCUIT*

 □ 概略図 : *SCHEMATIC DIAGRAM*

Dimension: [mm]


 □ 最大定格 : *MAXIMUM RATINGS* (at Tc=25°C unless otherwise specified)

Item		Symbol	Condition	Rated Value	Unit
IGBT	コレクタ・エミッタ間電圧 Collector-Emitter Voltage	V <sub>CES</sub>	G-E Short	1200	V
	ゲート・エミッタ間電圧 Gate-Emitter Voltage	V <sub>GES</sub>	C-E Short	±20	V
	コレクタ電流 Collector Current	I <sub>C</sub>	DC T <sub>c</sub> =85°C	50	A
		I <sub>CP</sub>	Pulse ≤ 1ms	100	
コレクタ損失 Collector Power Dissipation	P <sub>C</sub>	T <sub>j</sub> =175°C	277	W	
		T <sub>j</sub> =150°C	231		
Diode	繰り返しピーク逆電圧 Repetitive peak reverse voltage	V <sub>RRM</sub>		1200	V
	順電流 Forward Current	I <sub>F</sub>		50	A
		I <sub>FM</sub>	Pulse ≤ 1ms	100	
最大接合温度 Maximum Junction Temperature		T <sub>JMAX</sub>	瞬時動作(過負荷) Instantaneous Overload	175	°C
接合温度範囲 Junction Temperature Range		T <sub>j</sub>		-40~+150	°C
保存温度範囲 Storage Temperature Range		T <sub>stg</sub>		-40~+125	°C
絶縁耐圧 Isolation Voltage		V <sub>ISO</sub>	Terminal to Base AC, 1minute	2,500	V (RMS)
締め付けトルク Mounting Torque	Module Base to Heatsink	F <sub>tor</sub>	M6	3	N · m
	Busbar to Main Terminal		M5	2	

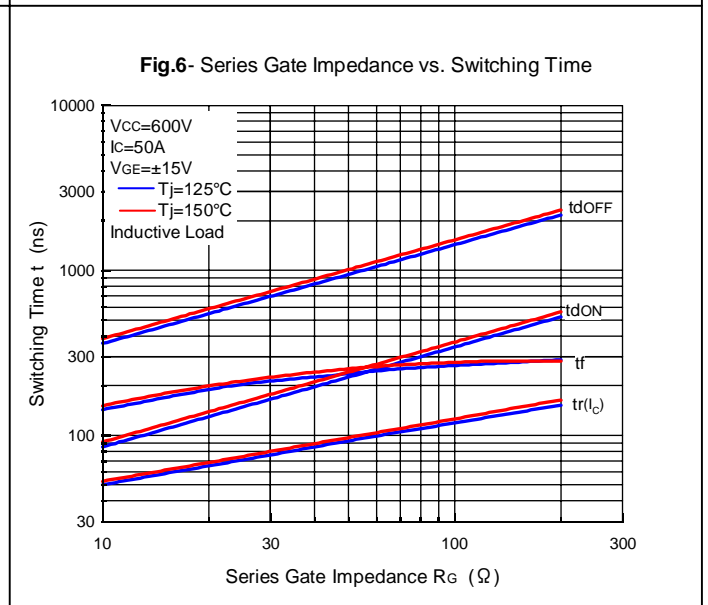
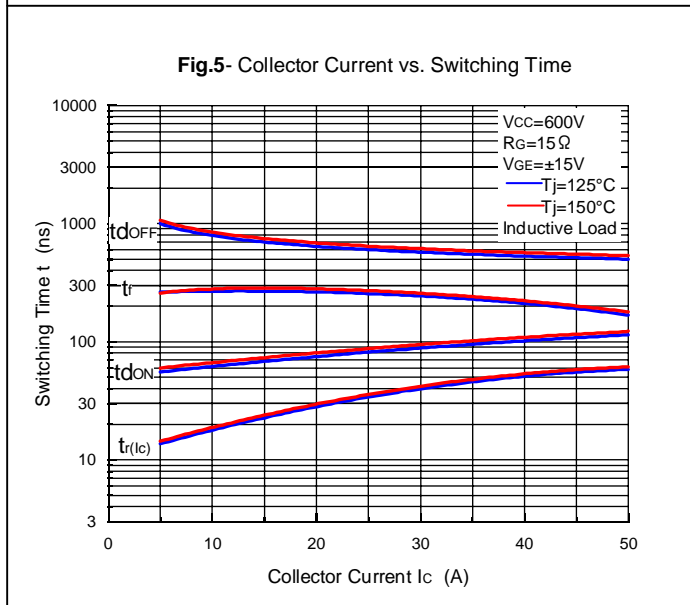
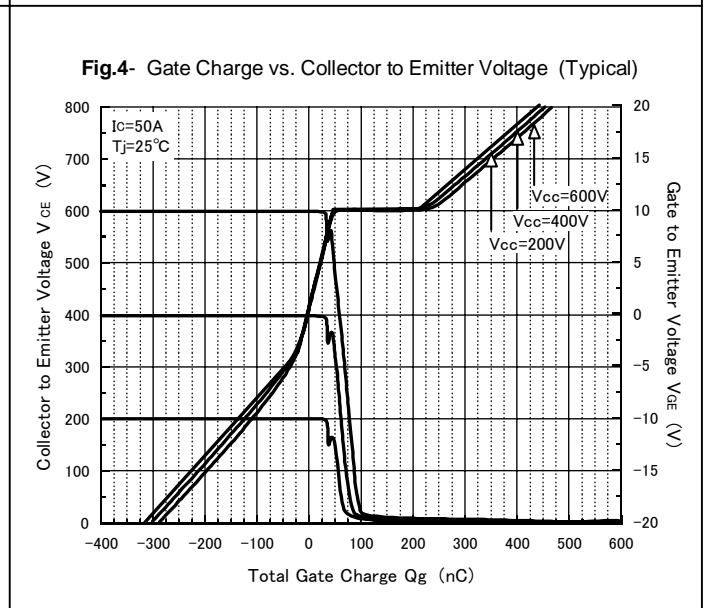
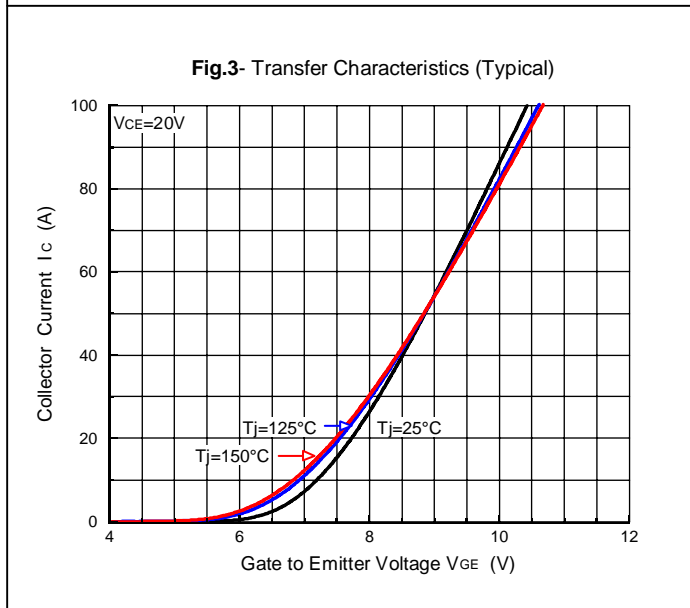
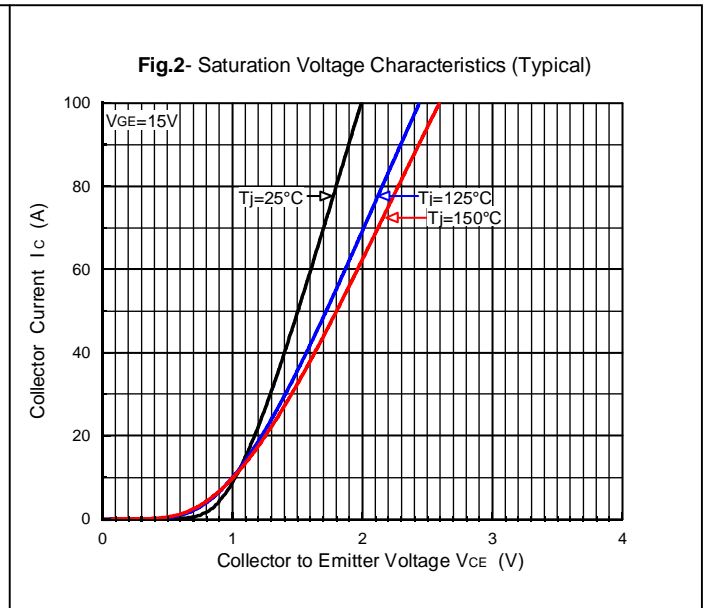
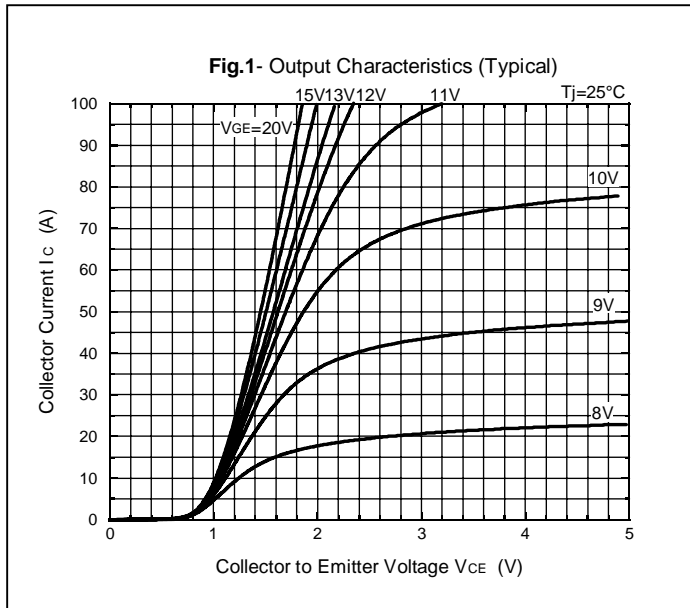
□ 電 氣 的 特 性 : **ELECTRICAL CHARACTERISTICS** (at  $T_J=25^\circ\text{C}$  unless otherwise specified)

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit	
IGBT	コレクタ遮断電流 Collector-Emitter Cut-Off Current	$I_{CES}$	$V_{CE}=1200V, V_{GE}=0V$	—	—	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	$V_{CE(sat.)}$	$I_C=50A, V_{GE}=15V$ (chip level)	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$ $T_J=150^\circ\text{C}$	— — —	1.50 1.70 1.80	2.00 — —	V
	ゲートしきい値電圧 Gate-Emitter Threshold Voltage	$V_{GE(th.)}$	$V_{CE}=10V, I_C=1.7mA$		4.8	—	7.0	V
	入力容量 Input Capacitance	$C_{ies}$	$V_{CE}=25V, V_{GE}=0V, f=1MHz$		—	5.3	—	nF
	出力容量 Output Capacitance	$C_{oes}$			—	0.16	—	
	帰還容量 Reverse Transfer Capacitance	$C_{res}$			—	0.12	—	
	ゲート電荷量 Gate Charge	$Q_g$	$V_{CC}=600V, I_C=50A, V_{GE}=-15\sim+15V$		—	550	—	nC
	スイッチング時間 Switching Time	上昇時間 Rise Time	$t_r$	$V_{CC}=600V, L_s=38nH$ $I_C=50A$ Inductive Load $R_g=15\Omega$ $V_{GE}=\pm 15V$ $T_J=150^\circ\text{C}$	—	60	—	ns
		ターンオン遅延時間 Turn-on Delay Time	$t_d(on)$		—	110	—	
下降時間 Fall Time		$t_f$	—		180	—		
ターンオフ遅延時間 Turn-off Delay Time		$t_d(off)$	—		500	—		
Diode	順電圧 Peak Forward Voltage	$V_F$	$I_F=50A, V_{GE}=0V$ (chip level)	$T_J=25^\circ\text{C}$ $T_J=125^\circ\text{C}$ $T_J=150^\circ\text{C}$	— — —	2.00 1.98 1.95	2.60 — —	V
	逆回復時間 Reverse Recovery Time	$t_{rr}$	$V_{CC}=600V, L_s=38nH$ $I_C=50A$ Inductive Load $R_g=15\Omega$ $V_{GE}=\pm 15V$ $T_J=150^\circ\text{C}$		—	130	—	ns
内部配線抵抗 Internal Lead Resistance		$R_{CC+EE}$	主端子—チップ間 / 1素子 Main Terminal - Chip / Per 1 Arm		—	—	1	$m\Omega$
内部インダクタンス Stray Inductance		$L_{SCE}$	メイン端子3—2間 Main Terminal 3 - Main Terminal 2		—	30	—	nH

 □ 熱 的 特 性 : **THERMAL CHARACTERISTICS**

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
熱 抵 抗 Thermal Resistance	IGBT	$R_{th(j-c)}$	Junction to Case Per 1 Arm (Tc測定点:チップ直下)	—	—	0.54	$^\circ\text{C}/\text{W}$
	Diode			—	—	0.97	
接 触 熱 抵 抗 Thermal Resistance	IGBT	$R_{th(c-f)}$	Case to heatsink Per 1 Arm Paste=1W/(m <sup>2</sup> ·°C)	—	0.10	—	
	Diode			—	0.17	—	

特性图 : CHARACTERISTICS CURVES



特性 : CHARACTERISTICS CURVES

