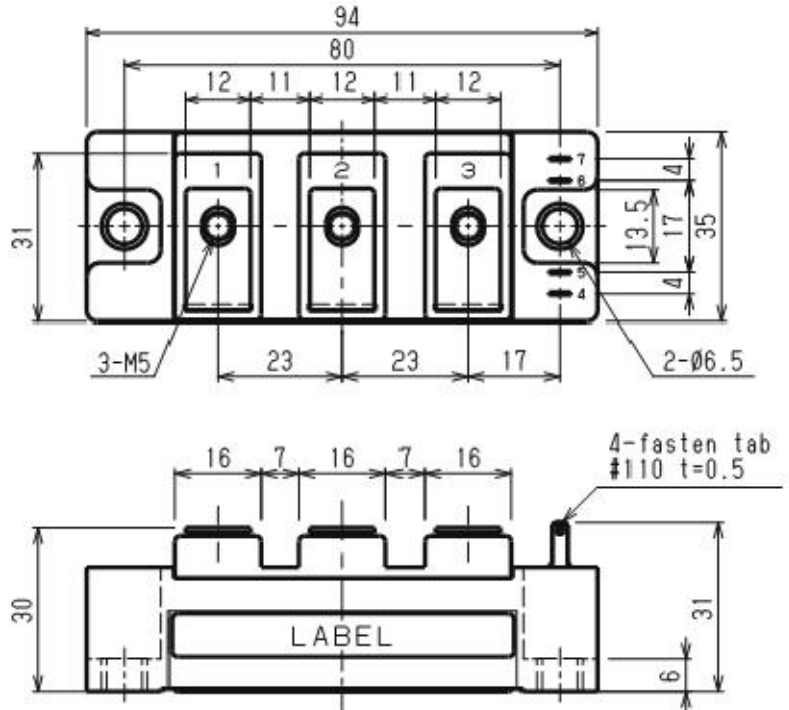
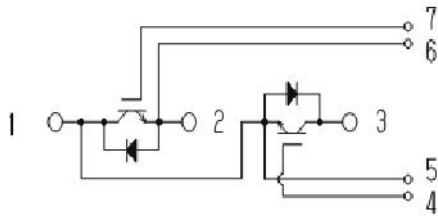


□ 回路図 : CIRCUIT

□ 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 _{CES}	G-E Short	1200	V
	ゲート・エミッタ間電圧 Gate-Emitter Voltage	V _{GES}	C-E Short	±20	V
	コレクタ電流 Collector Current	I _C	DC T _c =85°C	75	A
		I _{CP}	Pulse ≤ 1ms	150	
コレクタ損失 Collector Power Dissipation	P _C	T _j =175°C	348	W	
		T _j =150°C	290		
FWD	繰り返しピーク逆電圧 Repetitive peak reverse voltage	V _{RRM}		1200	V
	順電流 Forward Current	I _F		75	A
		I _{FM}	Pulse ≤ 1ms	150	
最大接合温度 Maximum Junction Temperature		T _{jMAX}	瞬時動作(過負荷) Instantaneous Overload	175	°C
接合温度範囲 Junction Temperature Range		T _j		-40~+150	°C
保存温度範囲 Storage Temperature Range		T _{stg}		-40~+125	°C
絶縁耐圧 Isolation Voltage		V _{ISO}	Terminal to Base AC, 1minute	2,500	V (RMS)
締め付けトルク Mounting Torque	Module Base to Heatsink	F _{tor}	M6	3	N·m
	Busbar to Main Terminal		M5	2	

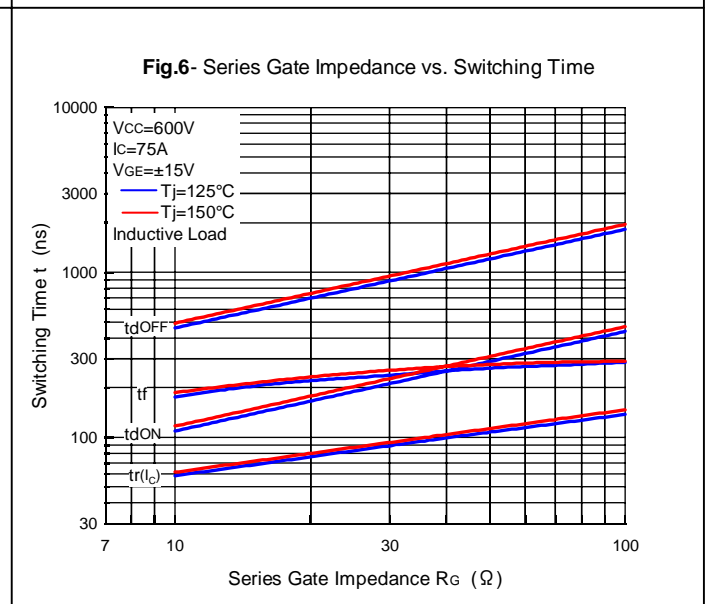
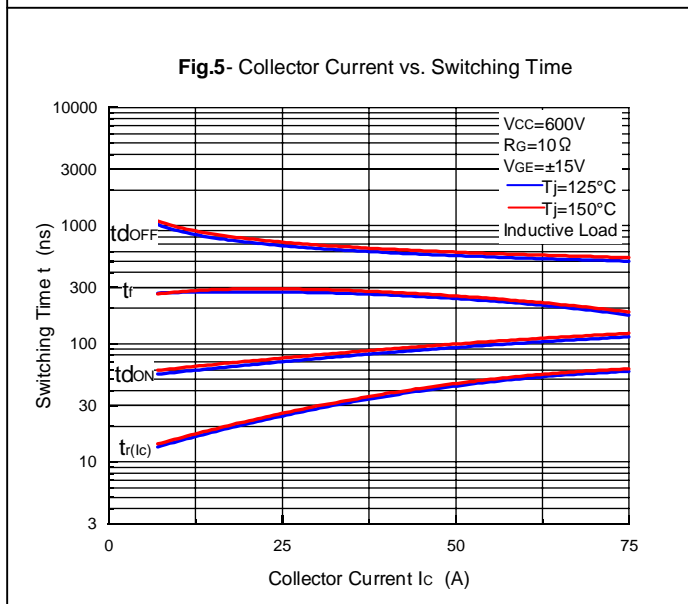
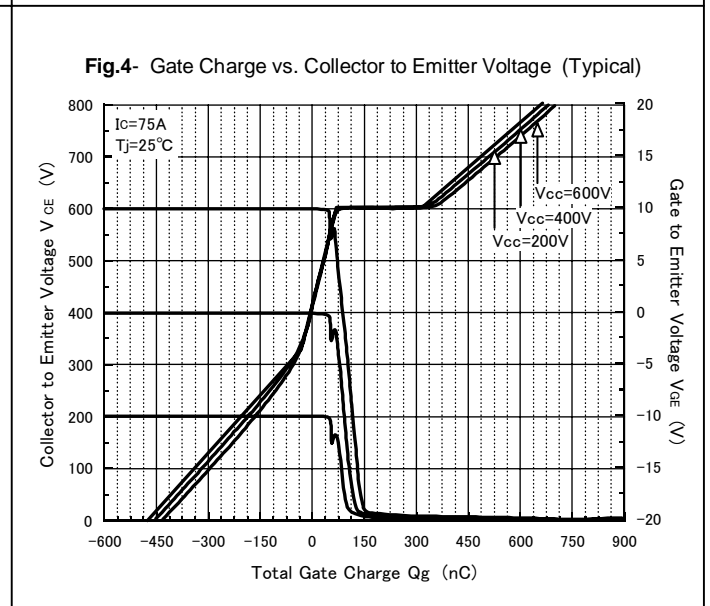
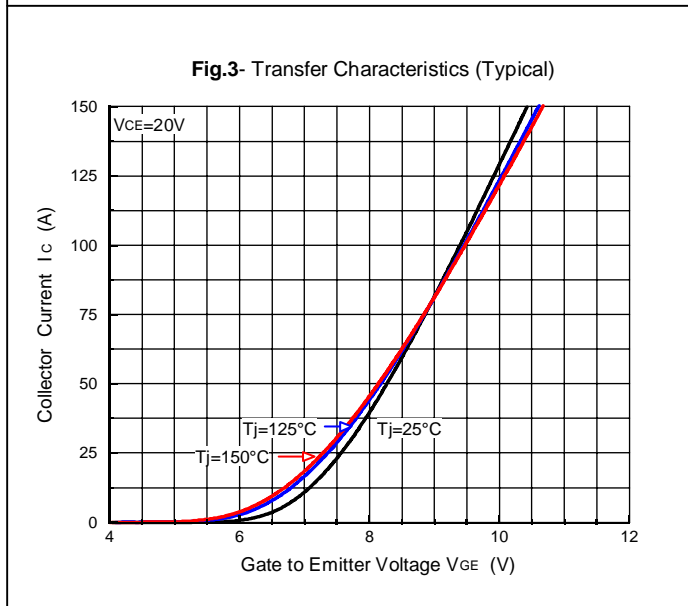
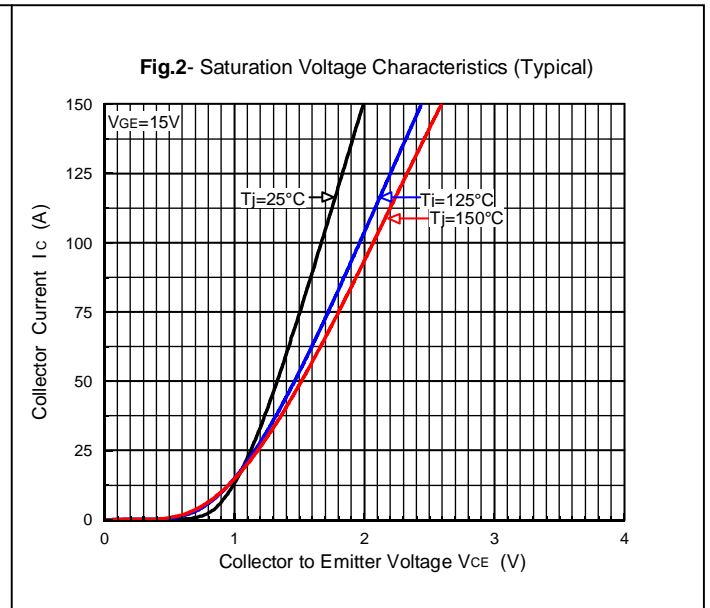
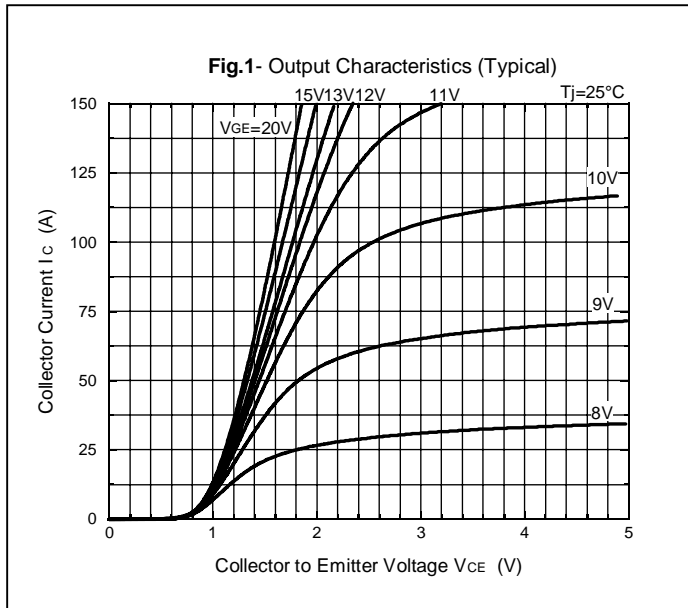
□ 電 氣 的 特 性 : **ELECTRICAL CHARACTERISTICS** (at $T_j=25^\circ\text{C}$ unless otherwise specified)

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit	
IGBT	コレクタ遮断電流 Collector-Emitter Cut-Off Current	ICES	$V_{CE}=1200\text{V}, V_{GE}=0\text{V}$	—	—	1.0	mA	
	ゲート漏れ電流 Gate-Emitter Leakage Current	IGES	$V_{GE}=\pm 20\text{V}, V_{CE}=0\text{V}$	—	—	1.0	μA	
	コレクタ・エミッタ間飽和電圧 Collector-Emitter Saturation Voltage	VCE(sat.)	$I_c=75\text{A}, V_{GE}=15\text{V}$ (chip level)	$T_j=25^\circ\text{C}$	—	1.50	2.00	V
				$T_j=125^\circ\text{C}$	—	1.70	—	
				$T_j=150^\circ\text{C}$	—	1.80	—	
	ゲートしきい値電圧 Gate-Emitter Threshold Voltage	VGE(th.)	$V_{CE}=10\text{V}, I_c=2.5\text{mA}$	4.8	—	7.0	V	
	入力容量 Input Capacitance	Cies	$V_{CE}=25\text{V}, V_{GE}=0\text{V}, f=1\text{MHz}$	—	8.0	—	nF	
	出力容量 Output Capacitance	Coes		—	0.23	—		
	帰還容量 Reverse Transfer Capacitance	Cres		—	0.20	—		
	ゲート電荷量 Gate Charge	Qg	$V_{CC}=600\text{V}, I_c=75\text{A}, V_{GE}=-15\sim+15\text{V}$	—	830	—	nC	
スイッチング時間 Switching Time	上昇時間 Rise Time	tr	$V_{CC}=600\text{V}, L_s=38\text{nH}$ $I_c=75\text{A}$ Inductive Load $R_g=10\Omega$ $V_{GE}=\pm 15\text{V}$ $T_j=150^\circ\text{C}$	—	60	—	ns	
	ターンオン遅延時間 Turn-on Delay Time	td(on)		—	110	—		
	下降時間 Fall Time	tf		—	180	—		
	ターンオフ遅延時間 Turn-off Delay Time	td(off)		—	500	—		
順電圧 Peak Forward Voltage	VF	$I_F=75\text{A}, V_{GE}=0\text{V}$ (chip level)	$T_j=25^\circ\text{C}$	—	2.00	2.60	V	
			$T_j=125^\circ\text{C}$	—	1.98	—		
			$T_j=150^\circ\text{C}$	—	1.95	—		
逆回復時間 Reverse Recovery Time	trr	$V_{CC}=600\text{V}, L_s=38\text{nH}$ $I_c=75\text{A}$ Inductive Load $R_g=10\Omega$ $V_{GE}=\pm 15\text{V}$ $T_j=150^\circ\text{C}$	—	150	—	ns		
内部配線抵抗 Internal Lead Resistance	RCC+EE'	主端子—チップ間 / 1素子 Main Terminal - Chip / Per 1 Arm	—	—	1	m Ω		
内部インダクタンス Stray Inductance	LsCE	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	Rth(j-c)	Junction to Case Per 1 Arm (Tc測定点:チップ直下)	—	—	0.43	$^\circ\text{C}/\text{W}$
	FWD			—	—	0.80	
接触熱抵抗 Thermal Resistance	IGBT	Rth(c-f)	Case to heatsink Per 1 Arm Paste=1W/(m 2 °C)	—	0.10	—	
	FWD			—	0.17	—	

特性图 : CHARACTERISTICS CURVES



特図 : CHARACTERISTICS CURVES

