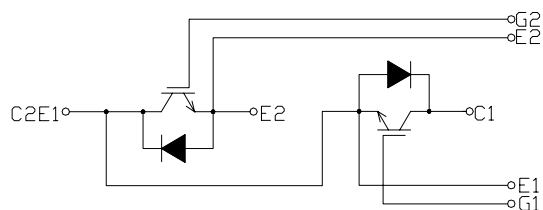
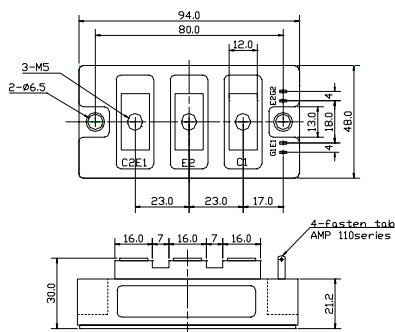


CIRCUIT



OUTLINE DRAWING



4-fasten- tab No 110

Dimension(mm)

Approximate Weight : 320g

MAXIMUM RATINGS (Tc=25°C)

Item		Symbol	PDMB75B12	Unit
Collector-Emitter Voltage		V_{CES}	1200	V
Gate - Emitter Voltage		V_{GES}	+/- 20	V
Collector Current	DC	I_C	75	A
	1 ms	I_{CP}	150	
Collector Power Dissipation		P_C	400	W
Junction Temperature Range		T_j	-40 to +150	°C
Storage Temperature Range		T_{stg}	-40 to +125	°C
Isolation Voltage (Terminal to Base AC, 1 min.)		V_{ISO}	2500	V
Mounting Torque	Module Base to Heatsink	F_{TOR}	3	N•m
	Bus Bar to Main Terminals		2	

ELECTRICAL CHARACTERISTICS (T_c=25°C)

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Emitter Cut-Off Current		ICES	VCE=1200V,VGE=0V	-	-	2.0	mA
Gate-Emitter Leakage Current		IGES	VGE=+/- 20V,VCE=0V	-	-	1.0	μA
Collector-Emitter Saturation Voltage		VCE(sat)	IC=75A,VGE=15V	-	1.9	2.4	V
Gate-Emitter Threshold Voltage		VGE(th)	VCE=5V,IC=75mA	4.0	-	8.0	V
Input Capacitance		Cies	VCE=10V,VGE=0V,f=1MHz	-	6300	-	pF
Switching Time	Rise Time	tr	VCC= 600V	-	0.25	0.45	μs
	Turn-on Time	ton	RL= 8 ohm	-	0.40	0.70	
	Fall Time	tf	RG= 13 ohm	-	0.25	0.35	
	Turn-off Time	toff	VGE= +/- 15V	-	0.80	1.00	

FREE WHEELING DIODES RATINGS & CHARACTERISTICS (Tc=25°C)

Item	Symbol	Rated Value	Unit
Forward Current	DC	75	A
	1 ms	150	

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Peak Forward Voltage	V_F	$I_F=75A, V_{GE}=0V$	-	1.9	2.4	V
Reverse Recovery Time	t_{rr}	$I_F=75A, V_{GE}=-10V, di/dt=150A/\mu s$	-	0.2	0.3	μs

THERMAL CHARACTERISTICS

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Thermal Impedance	IGBT	$R_{th(j-c)}$	Junction to Case	-	-	0.3	°C/W
	DIODE			-	-	0.6	

PDMB75B12

Fig.1- Output Characteristics (Typical)

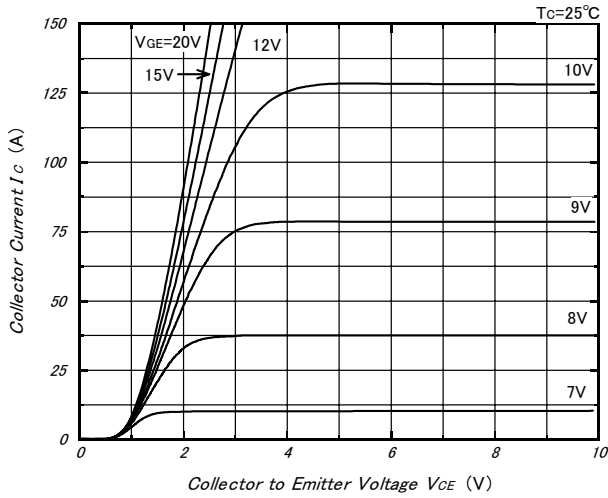


Fig.2- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

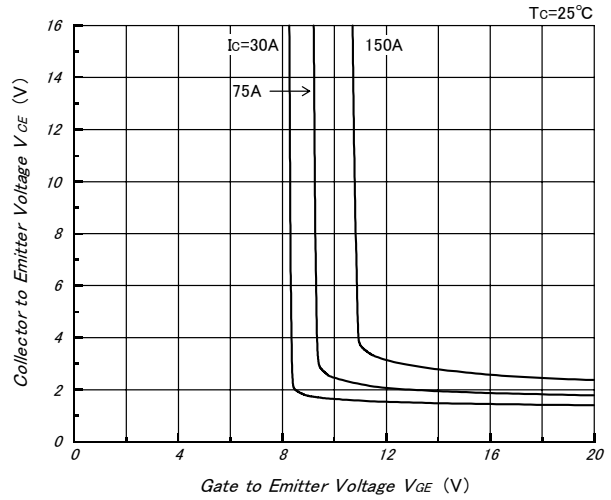


Fig.3- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

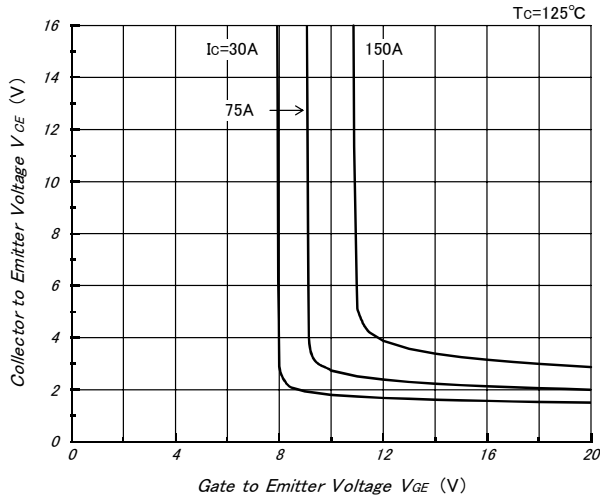


Fig.4- Gate Charge vs. Collector to Emitter Voltage (Typical)

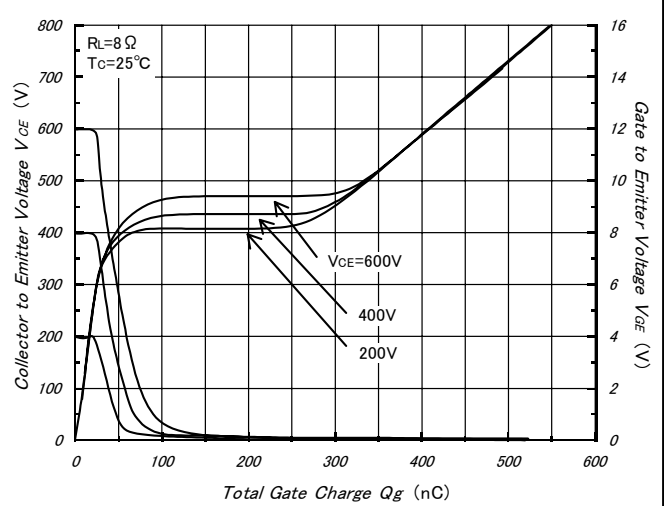


Fig.5- Capacitance vs. Collector to Emitter Voltage (Typical)

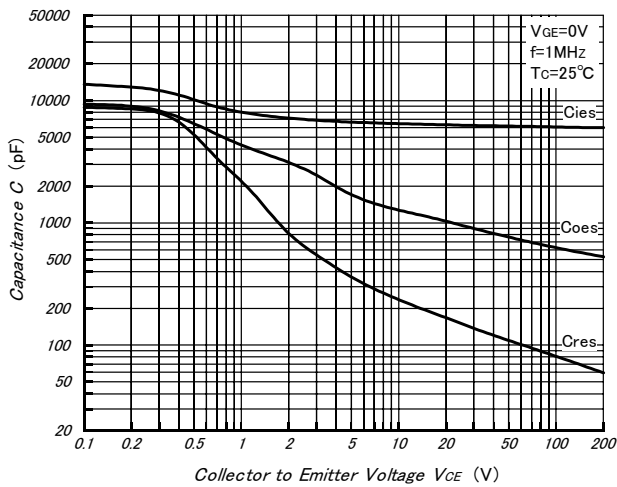
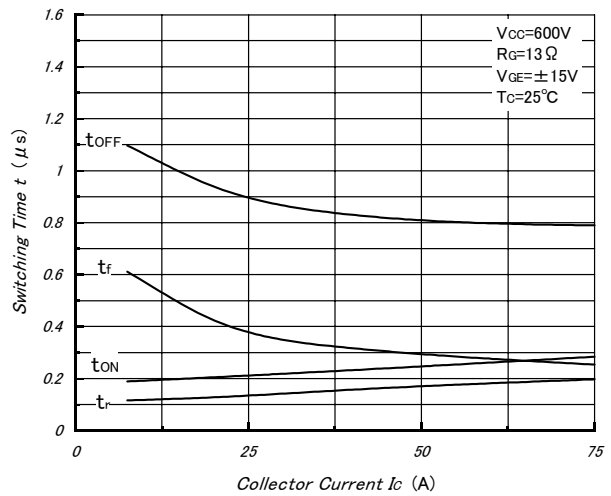


Fig.6- Collector Current vs. Switching Time (Typical)



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

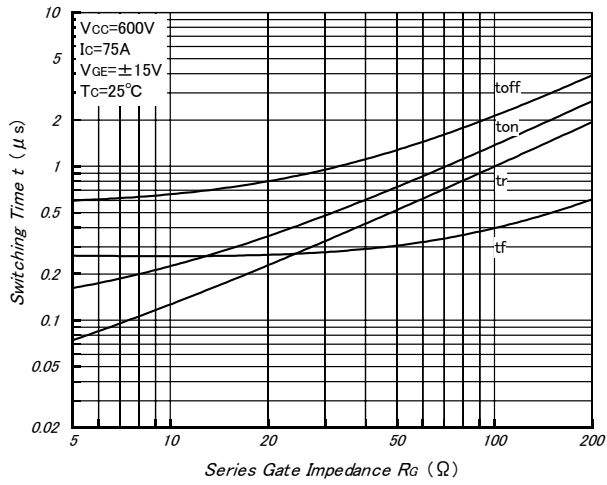


Fig.8- Forward Characteristics of Free Wheeling Diode (Typical)

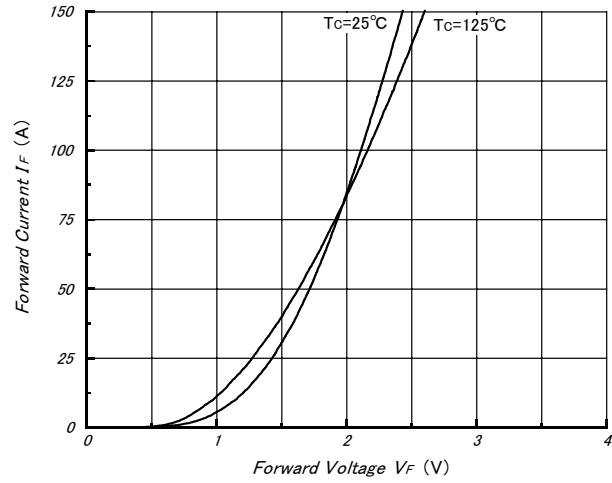


Fig.9- Reverse Recovery Characteristics (Typical)

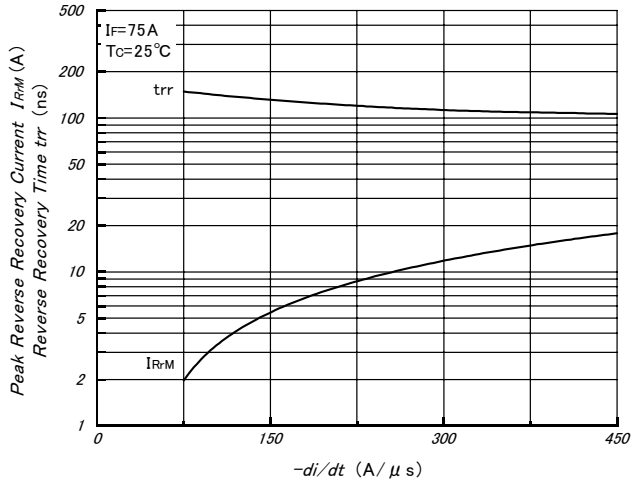


Fig.10- Reverse Bias Safe Operating Area (Typical)

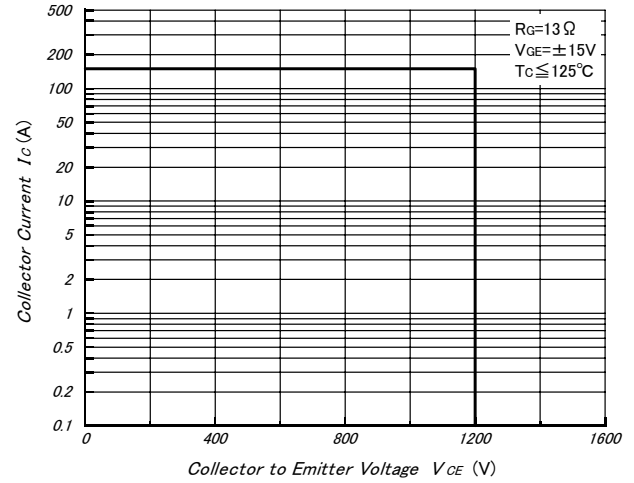


fig11-Tansient Thermal Impedance

