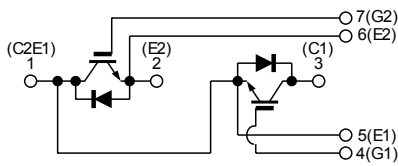
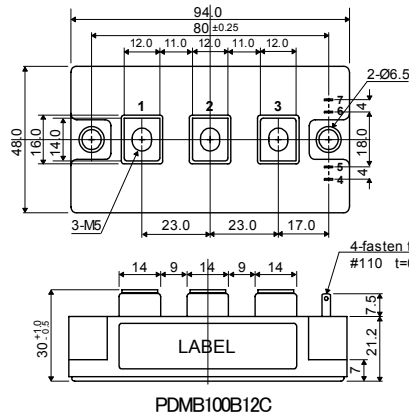


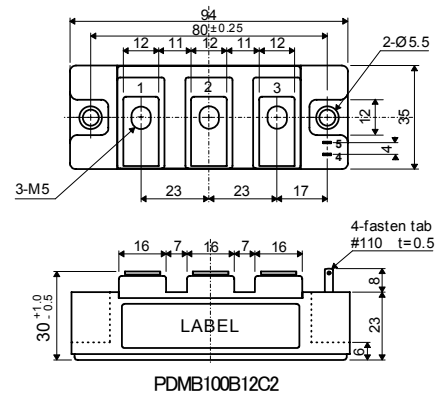
□ 回路図 : *CIRCUIT*



□ 外形寸法図 : *OUTLINE DRAWING*



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PDMB100B12C2

Dimension: [mm]

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

I t e m		S y m b o l	R a t e d V a l u e		U n i t
コレクタ・エミッタ間電圧 Collector-Emitter Voltage		V_{CES}	1, 2 0 0		V
ゲート・エミッタ間電圧 Gate-Emitter Voltage		V_{GES}	$\pm 2 0$		V
コレクタ電流 Collector Current	DC	I_C	1 0 0		A
	1 m s	I_{CP}	2 0 0		
コレクタ損失 Collector Power Dissipation		P_C	5 0 0		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, 1 minute) Isolation Voltage		V_{ISO}	2, 5 0 0		$V_{(RMS)}$
締め付けトルク Mounting Torque	Module Base to Heatsink	F_{tor}	PDMB100B12C 3 (3 0. 6)	PDMB100B12C2 2 (2 0. 4)	N・m (kgf・cm)
	Busbar to Main Terminal		2 (2 0. 4)		

□ 電氣的特性 : *ELECTRICAL CHARACTERISTICS* ($T_c = 25^{\circ}\text{C}$)

Characteristic		Symbol	Test Condition	Min.	T _{VD}	Max.	Unit
コレクタ遮断電流 Collector-Emitter Cut-Off Current		I _{CES}	V _{CE} = 1200V, V _{GE} = 0V	—	—	2.0	mA
ゲート漏れ電流 Gate-Emitter Leakage Current		I _{GES}	V _{GE} = ±20V, V _{CE} = 0V	—	—	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 = 100A, V _{GE} = 15V	—	1.9	2.4	V
ゲートしきい値電圧 Gate-Emitter Threshold Voltage		V _{GE(th)}	V _{CE} = 5V, I _C = 100mA	4.0	—	8.0	V
入力容量 Input Capacitance		C _{ies}	V _{CE} = 10V, V _{GE} = 0V, f= 1MHz	—	8,300	—	pF
スイッチング時間 Switching Time	上昇時間 Rise Time	t _r	V _{CC} = 600V R _L = 6Ω R _G = 10Ω V _{GE} = ±15V	—	0.25	0.45	μs
	ターンオン時間 Turn-on Time	t _{on}		—	0.40	0.70	
	下降時間 Fall Time	t _f		—	0.25	0.35	
	ターンオフ時間 Turn-off Time	t _{off}		—	0.80	1.10	

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

I t e m		S y m b o l	R a t e d V a l u e	U n i t
順 電 流 Forward Current	DC	I_F	100	A
	1 m s	I_{FM}	200	

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
順電壓 Peak Forward Voltage	V_F	$I_F = 100A, V_{GE} = 0V$	—	1.9	2.4	V
逆回復時間 Reverse Recovery Time	t_{rr}	$I_F = 100A, V_{GE} = -10V$ $dI/dt = 200A/\mu s$	—	0.2	0.3	μs

□ 熱 的 特 性 : *THERMAL CHARACTERISTICS*

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
熱 抵 抗 Thermal Impedance	I G B T	Rth(j-c)	Junction to Case	—	—	0.24	°C/W
	Diode			—	—	0.42	

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Fig.1- Output Characteristics (Typical)

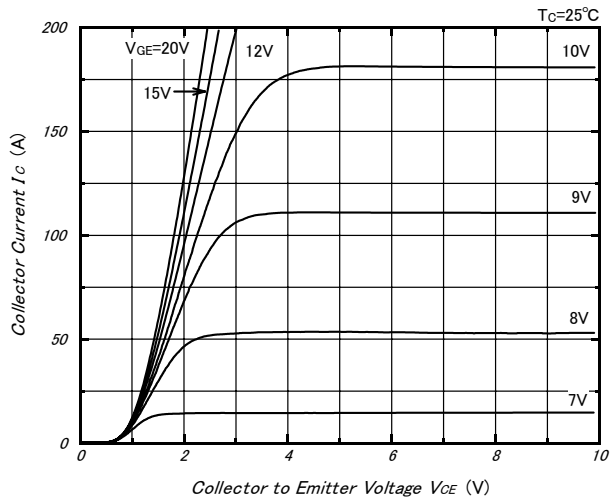


Fig.2- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

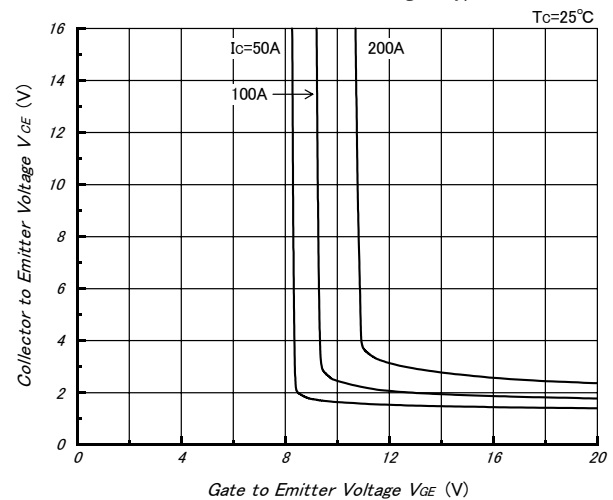


Fig.3- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

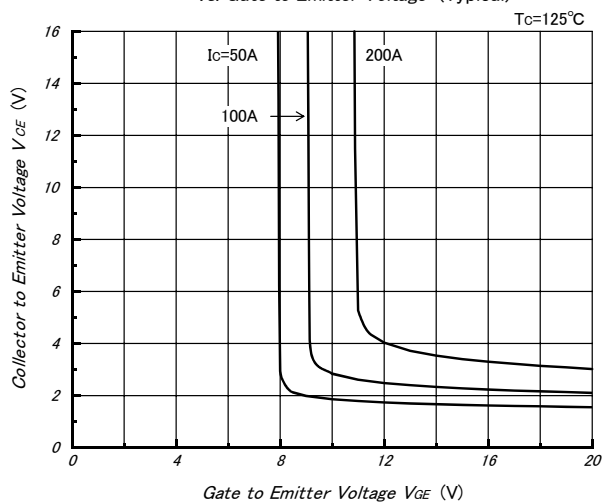


Fig.4- Gate Charge vs. Collector to Emitter Voltage (Typical)

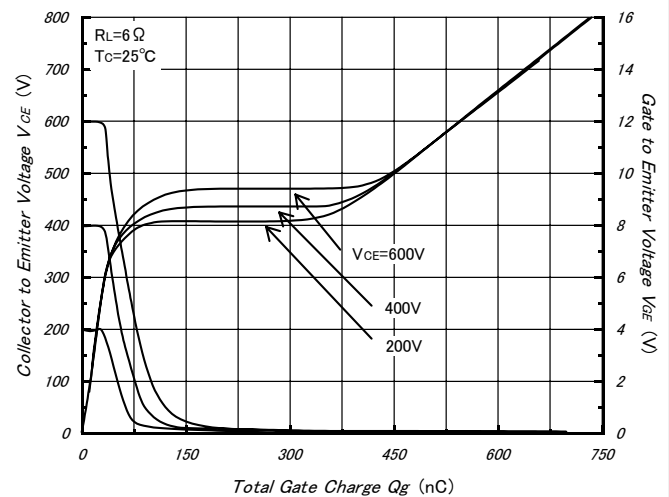


Fig.5- Capacitance vs. Collector to Emitter Voltage (Typical)

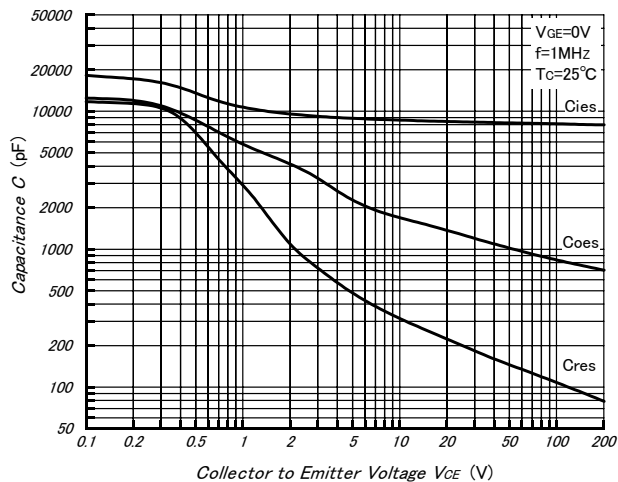
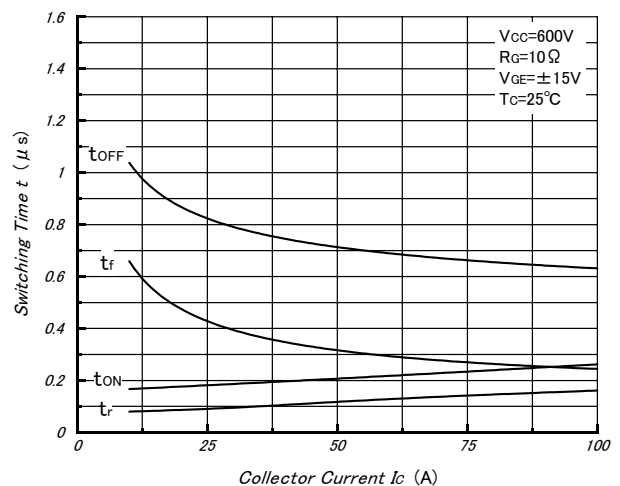


Fig.6- Collector Current vs. Switching Time (Typical)



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

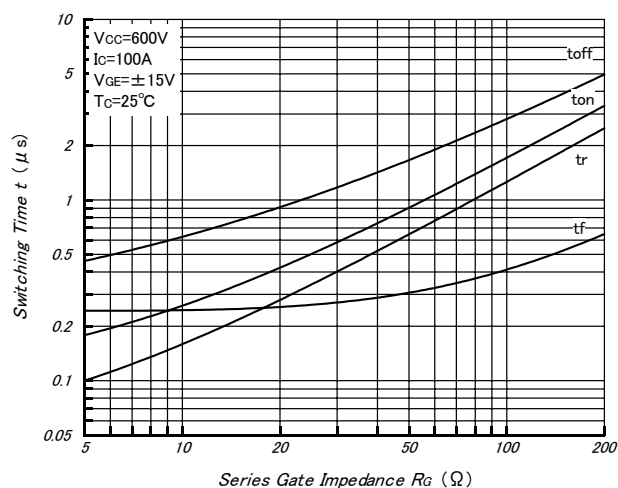


Fig.8- Forward Characteristics of Free Wheeling Diode (Typical)

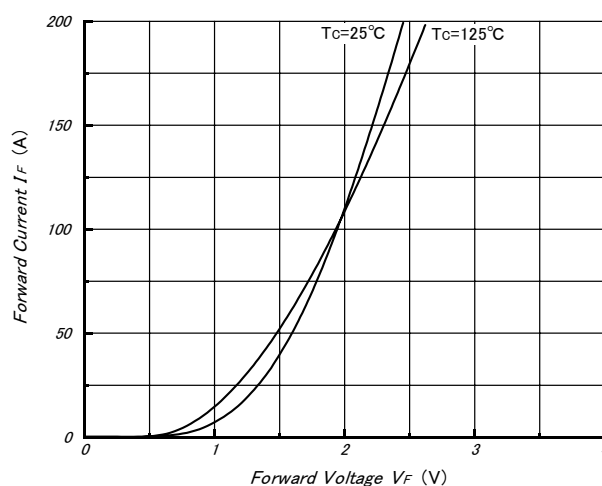


Fig.9- Reverse Recovery Characteristics (Typical)

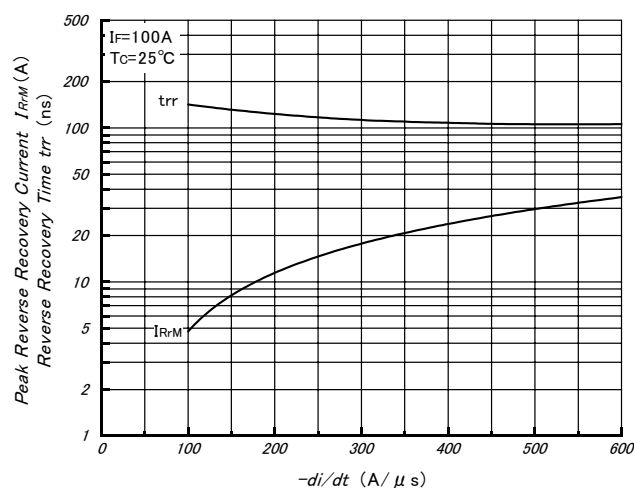


Fig.10- Reverse Bias Safe Operating Area

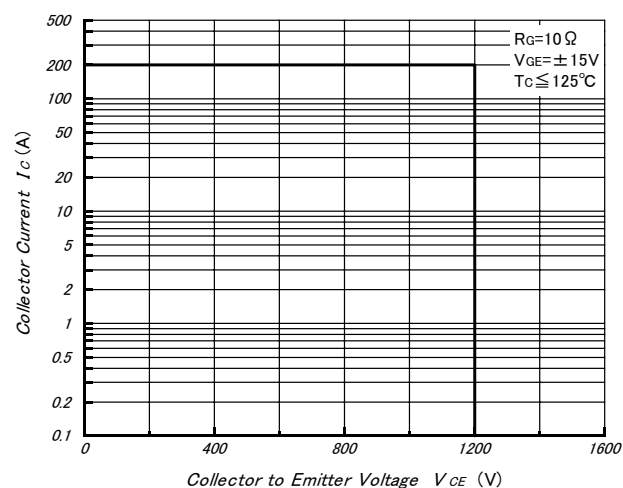


Fig.11- Transient Thermal Impedance

