

IGBT Module-Dual

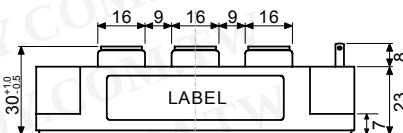
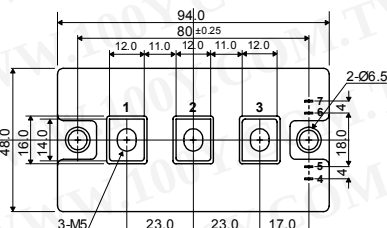
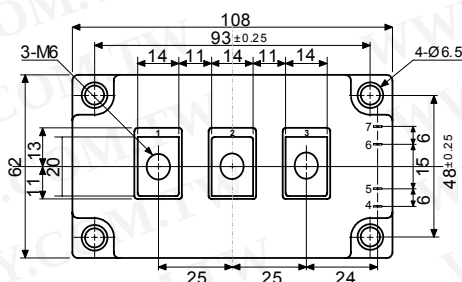
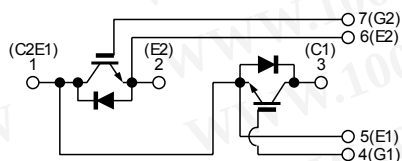
300A, 600V

PDMB300E6

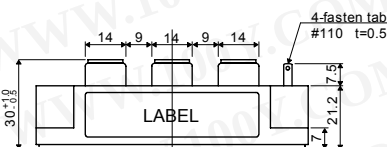
PDMB300E6C

□ 回路図 : CIRCUIT

□ 外形寸法図 : OUTLINE DRAWING



PDMB300E6



PDMB300E6C

Dimension: [mm]

□ 最大定格 : MAXIMUM RATINGS (T_c = 25°C)

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}	±20	V
コレクタ電流 Collector Current	DC	I _C	A
	1ms	I _{CP}	
コレクタ損失 Collector Power Dissipation	P _C	1,040	W
接合温度 Junction Temperature Range	T _j	-40 ~ +150	°C
保存温度 Storage Temperature Range	T _{stg}	-40 ~ +125	°C
絶縁耐圧(Terminal to Base AC, 1 minute) Isolation Voltage	V _{ISO}	2,500	V (RMS)
締め付けトルク Mounting Torque	F _{tor}	PDMB3006	N・m (kgf・cm)
		3 (30.6)	
		PDMB300E6C	
		3 (30.6)	
		2 (20.4)	

□ 電気的特性 : ELECTRICAL CHARACTERISTICS (T_c = 25°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} = ±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 = 300A, V _{GE} = 15V	—	2.1	2.6	V
ゲートしきい値電圧 Gate-Emitter Threshold Voltage	V _{GE(th)}	V _{CE} = 5V, I _C = 300mA	4.0	—	8.0	V
入力容量 Input Capacitance	C _{ies}	V _{CE} = 10V, V _{GE} = 0V, f = 1MHz	—	15,000	—	pF
スイッチング時間 Switching Time	上昇時間 Rise Time	t _r	—	0.15	0.40	μs
	ターンオン時間 Turn-on Time	t _{on}	—	0.30	0.75	
	下降時間 Fall Time	t _f	—	0.10	0.35	
	ターンオフ時間 Turn-off Time	t _{off}	—	0.40	0.80	

□ フリーホイールダイオードの特性 : FREE WHEELING DIODE RATINGS & CHARACTERISTICS (T_c = 25°C)

Item	Symbol	Rated Value	Unit
順電流 Forward Current	DC	I _F	A
	1ms	I _{FM}	
順電圧 Peak Forward Voltage	V _F	I _F = 300A, V _{GE} = 0V	V
逆回復時間 Reverse Recovery Time	t _{rr}	I _F = 300A, V _{GE} = -10V di/dt = 600A/μs	μs

□ 熱的特性 : THERMAL CHARACTERISTICS

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
熱抵抗 Thermal Impedance	IGBT	R _{th(j-c)}	—	—	0.12	°C/W
	Diode	Junction to Case (Tc測定点チップ直下)	—	—	0.24	

Fig.1- Output Characteristics (Typical)

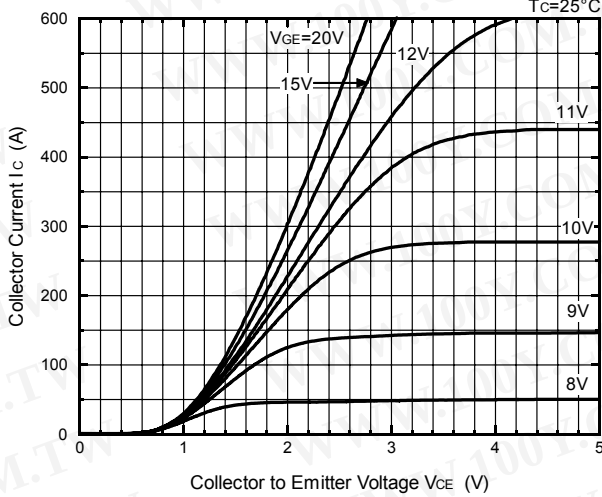


Fig.2- Output Characteristics (Typical)

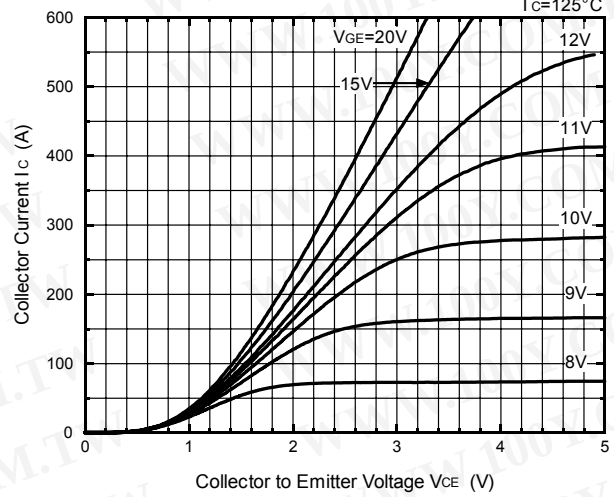


Fig.3- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

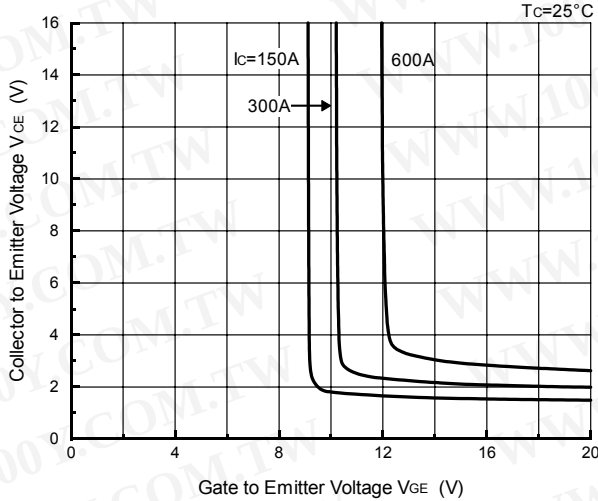


Fig.4- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

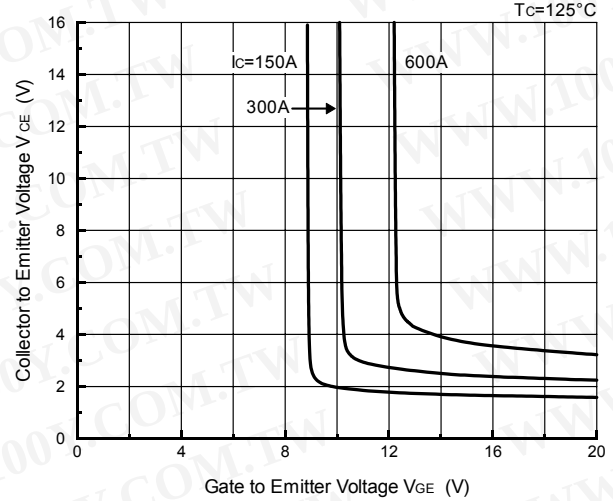


Fig.5- Gate Charge vs. Collector to Emitter Voltage (Typical)

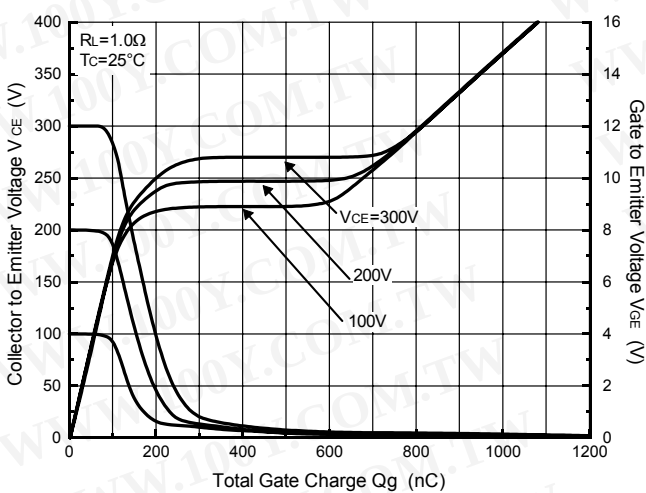


Fig.6- Capacitance vs. Collector to Emitter Voltage (Typical)

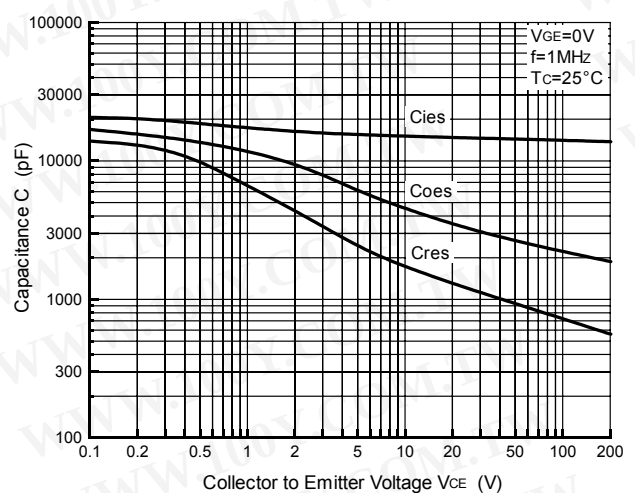


Fig.7- Collector Current vs. Switching Time (Typical)

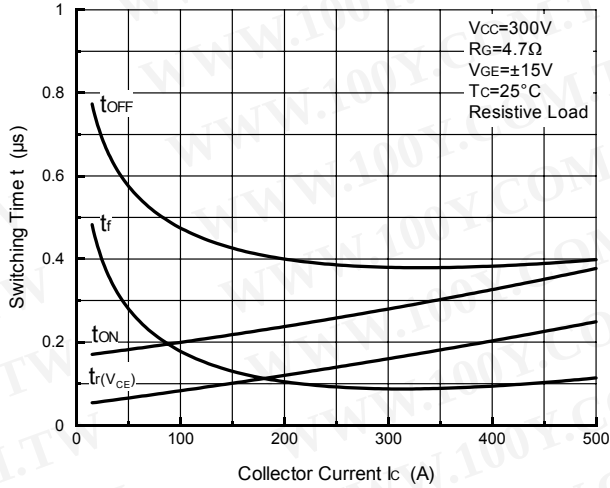


Fig.8- Series Gate Impedance vs. Switching Time (Typical)

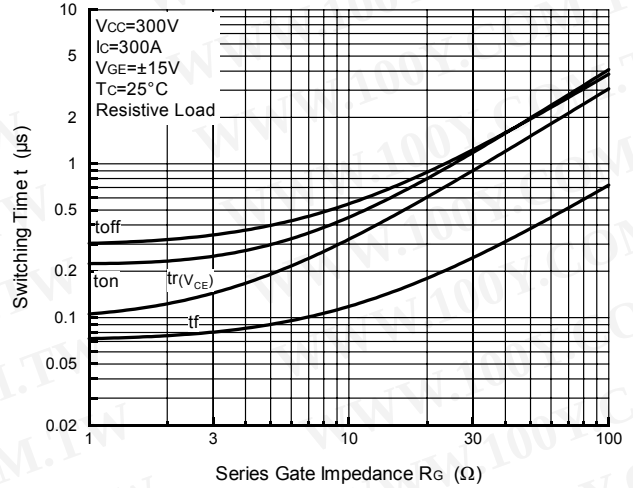


Fig.9- Collector Current vs. Switching Time

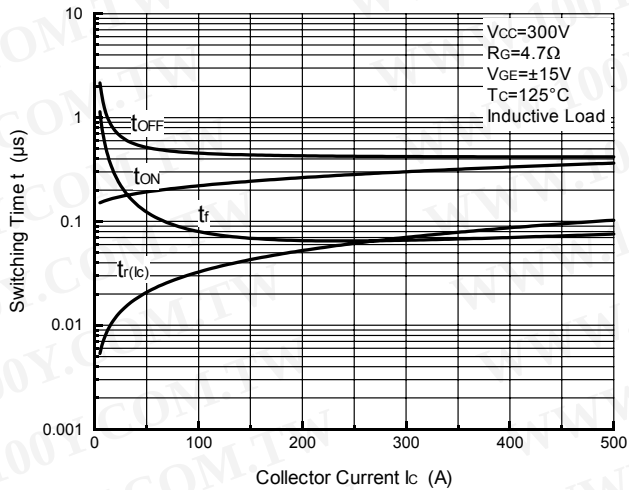


Fig.10- Series Gate Impedance vs. Switching Time

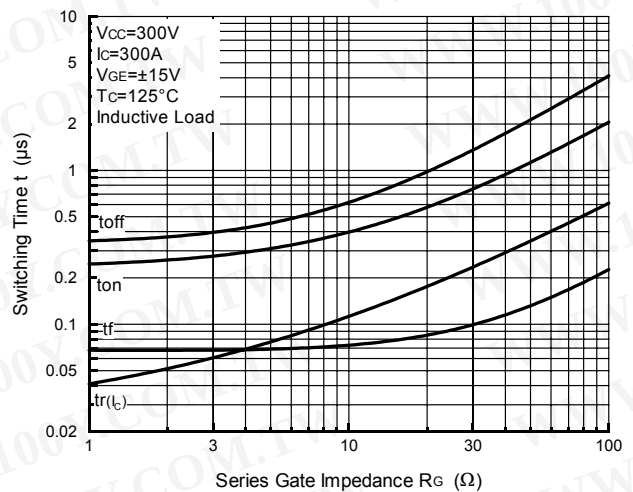


Fig.11- Collector Current vs. Switching Loss

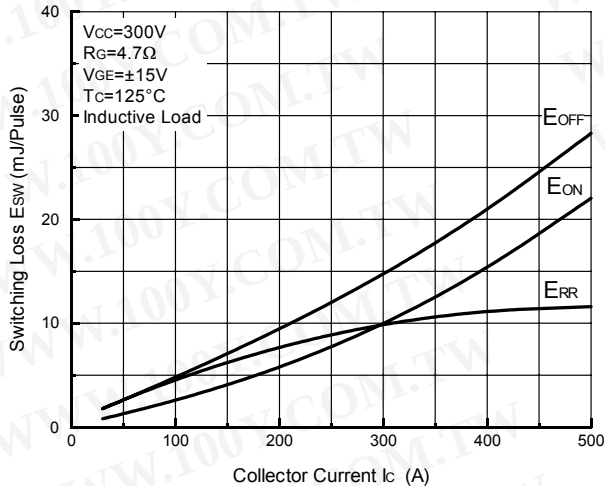
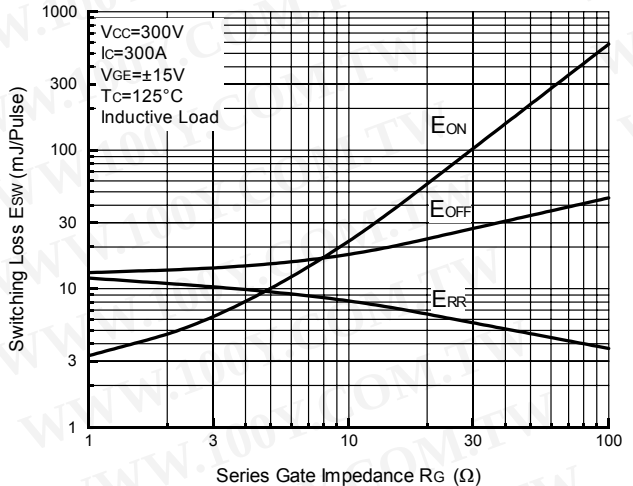


Fig.12- Series Gate Impedance vs. Switching Loss



PDMB300E6
PDMB300E6C

勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

QS043-402-20391 (5/5)

Fig.13- Forward Characteristics of Free Wheeling Diode (Typical)

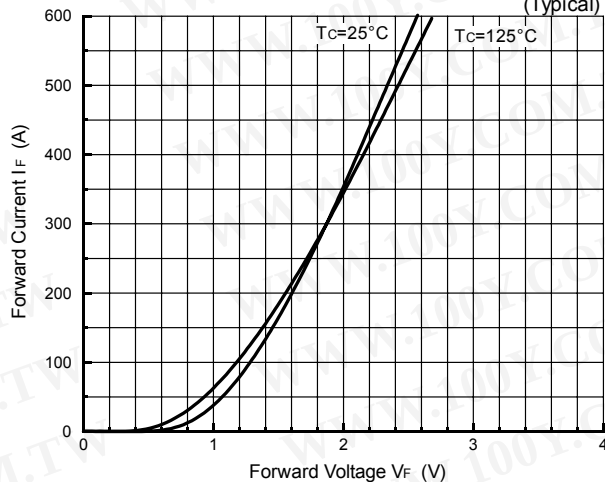


Fig.14- Reverse Recovery Characteristics (Typical)

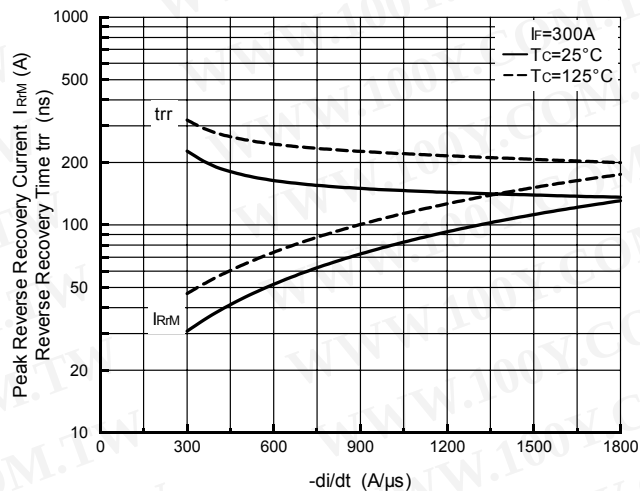


Fig.15- Reverse Bias Safe Operating Area

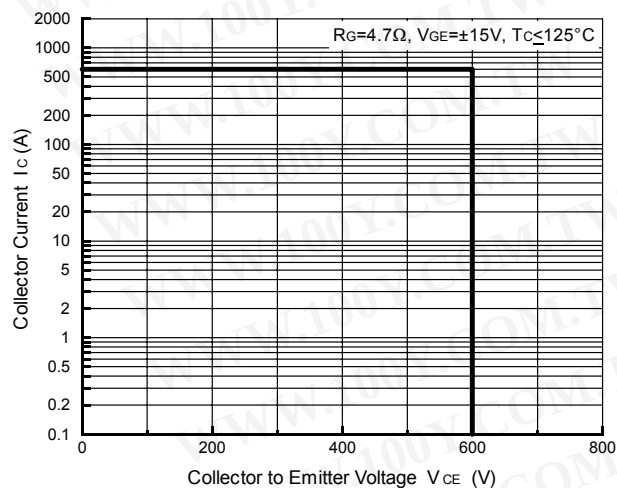


Fig.16- Transient Thermal Impedance

