

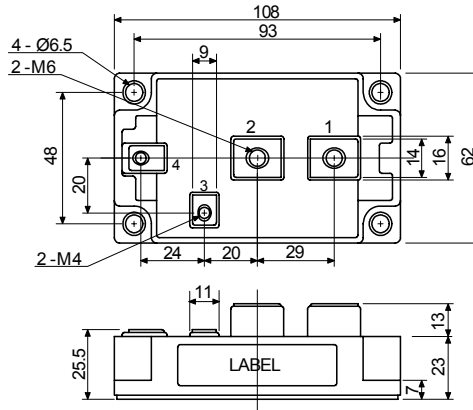
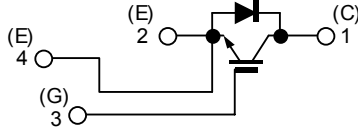
IGBT Module-Single

300 A, 1200V

PHMB300B12

□ 回路図 : CIRCUIT

□ 外形寸法図 : OUTLINE DRAWING



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-Emmitter Voltage	V _{CEs}	1,200	V	
ゲート・エミッタ間電圧 Gate-Emmitter Voltage	V _{GES}	±20	V	
コレクタ電流 Collector Current	DC	300	A	
	1ms	600		
コレクタ損失 Collector Power Dissipation	P _c	1,460	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, 1minute) Isolation Voltage	V _{ISO}	2,500	V _(RMS)	
締め付けトルク Mounting Torque	Module Base to Heatsink Busbar to Main Terminal	F _{tor}	3 (30.6)	N·m (kgf·cm)
		M4	1.4 (14.3)	
		M6	3 (30.6)	

□ 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-Emmitter Cut-Off Current	I _{CEs}	V _{CE} =1200V, V _{GE} =0V	-	-	6.0	mA
ゲート漏れ電流 Gate-Emmitter 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-Emmitter Saturation Voltage	V _{CE(sat)}	I _C =300A, V _{GE} =15V	-	1.9	2.4	V
ゲートしきい値電圧 Gate-Emmitter 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	-	25,000	-	pF
スイッチング時間 Switching Time	上昇時間 Rise Time	V _{CC} =600V R _i =2Ω R _g =1.3Ω V _{GE} =±15V	-	0.25	0.45	μs
	ターンオン時間 Turn-on Time		-	0.40	0.70	
	下降時間 Fall Time		-	0.25	0.35	
	ターンオフ時間 Turn-off Time		-	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°C)

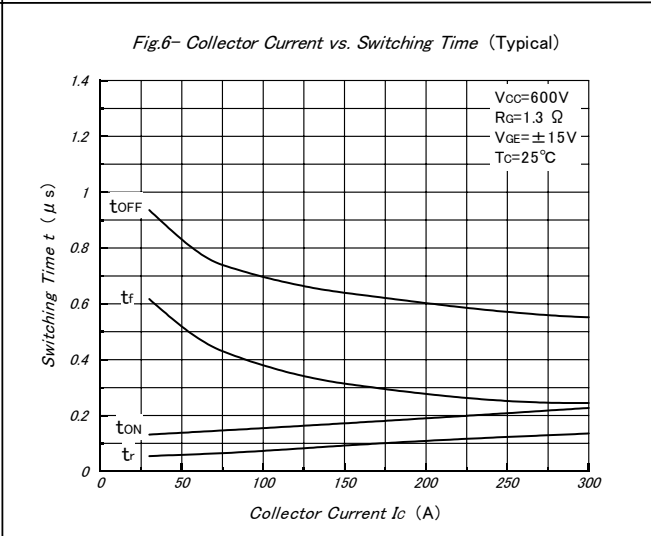
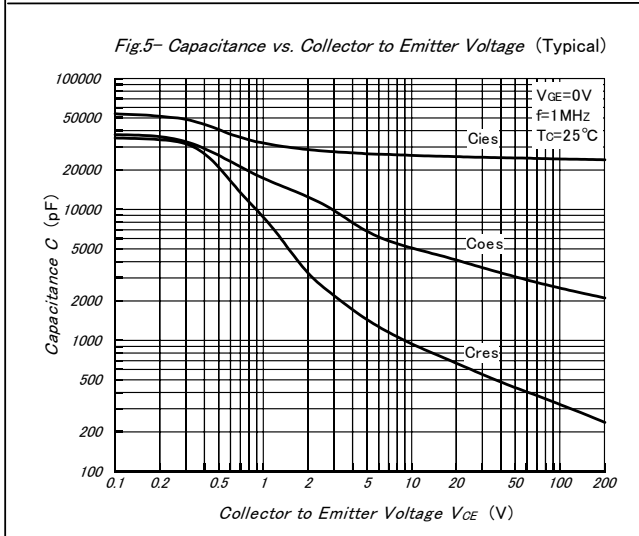
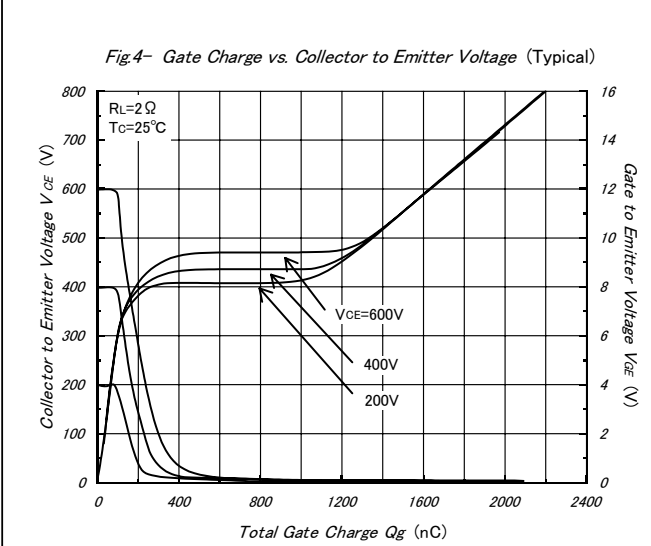
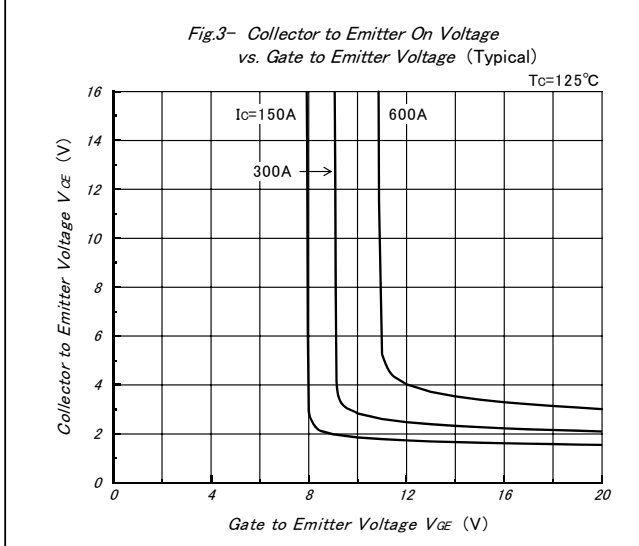
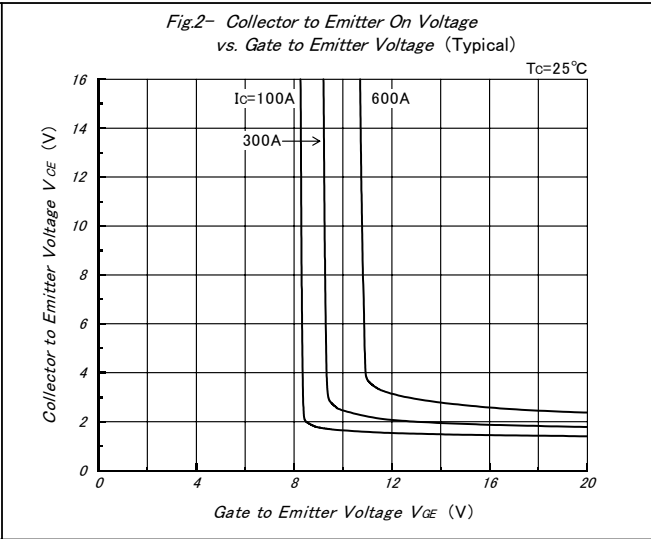
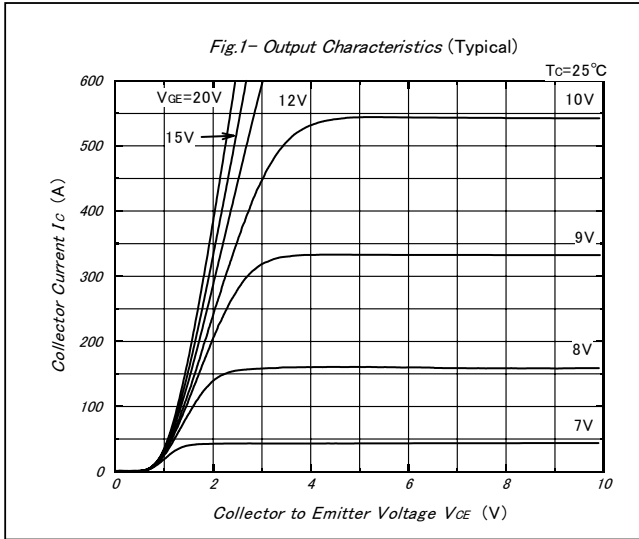
Item	Symbol	Rated Value	Unit
順電流 Forward Current	DC	300	A
	1ms	600	

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
順電圧 Peak Forward Voltage	V _F	I _F =300A, V _{GE} =0V	-	1.9	2.4	V
逆回復時間 Reverse Recovery Time	t _{rr}	I _F =300A, V _{GE} =-10V di/dt=600A/μs	-	0.2	0.3	μs

□ 熱的特性 : THERMAL CHARACTERISTICS

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
熱抵抗 Thermal Impedance	IGBT	Junction to Case	-	-	0.086	°C/W
	Diode		-	-	0.16	

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