

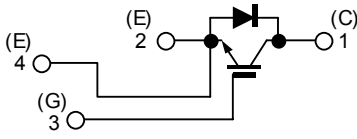
IGBT Module-Single

600A, 600V

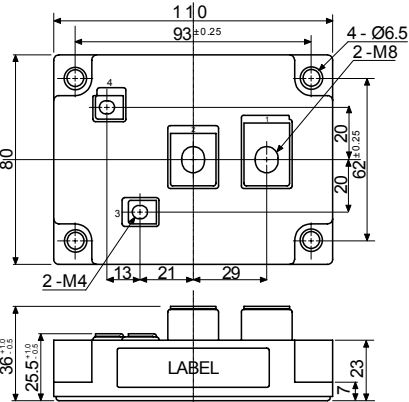
PHMB600E6

PHMB600E6C

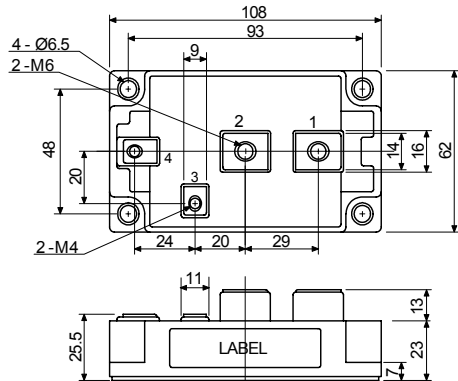
回路図 : CIRCUIT



外形寸法図 : OUTLINE DRAWING



PHMB600E6



PHMB600E6C

最大定格 : MAXIMUM RATINGS (T<sub>c</sub> = 25°C)

Item	Symbol	Rated Value	Unit
コレクタ・エミッタ間電圧 Collector-Emmitter Voltage	V <sub>CEs</sub>	600	V
ゲート・エミッタ間電圧 Gate-Emmitter Voltage	V <sub>GES</sub>	±20	V
コレクタ電流 Collector Current	DC	600	A
	1ms	1,200	
コレクタ損失 Collector Power Dissipation	P <sub>C</sub>	2,080	W
接合温度 Junction Temperature Range	T <sub>j</sub>	-40~+150	°C
保存温度 Storage Temperature Range	T <sub>stg</sub>	-40~+125	°C
絶縁耐圧(Terminal to Base AC, 1minute) Isolation Voltage	V <sub>Iso</sub>	2,500	V <sub>(RMS)</sub>
締め付けトルク Mounting Torque	Module Base to Heatsink	PHMB600E6	N・m (kgf・cm)
	Busbar to Terminals		
		3 (30.6)	
		M4 1.4 (14.3)	
		M8 10.5 (10.7)	
		PHMB600E6C	
		3 (30.6)	
		M4 1.4 (14.3)	
		M6 3 (30.6)	

電气的特性 : ELECTRICAL CHARACTERISTICS (T<sub>c</sub> = 25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
コレクタ遮断電流 Collector-Emmitter Cut-Off Current	I <sub>CEs</sub>	V <sub>CE</sub> = 600V, V <sub>GE</sub> = 0V	-	-	1.0	mA
ゲート漏れ電流 Gate-Emmitter Leakage Current	I <sub>GES</sub>	V <sub>GE</sub> = ±20V, V <sub>CE</sub> = 0V	-	-	1.0	μA
コレクタ・エミッタ間飽和電圧 Collector-Emmitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 600A, V <sub>GE</sub> = 15V	-	2.1	2.6	V
ゲートしきい値電圧 Gate-Emmitter Threshold Voltage	V <sub>GE(th)</sub>	V <sub>CE</sub> = 5V, I <sub>C</sub> = 600mA	4.0	-	8.0	V
入力容量 Input Capacitance	C <sub>ies</sub>	V <sub>CE</sub> = 10V, V <sub>GE</sub> = 0V, f = 1MHz	-	30,000	-	pF
スイッチング時間 Switching Time	上昇時間 Rise Time	t <sub>r</sub>	-	0.15	0.35	μs
	ターンオン時間 Turn-on Time	t <sub>on</sub>	-	0.30	0.85	
	下降時間 Fall Time	t <sub>f</sub>	-	0.10	0.25	
	ターンオフ時間 Turn-off Time	t <sub>off</sub>	-	0.40	0.80	

フリーホイーリングダイオードの特性 : FREE WHEELING DIODE RATINGS & CHARACTERISTICS (T<sub>c</sub> = 25°C)

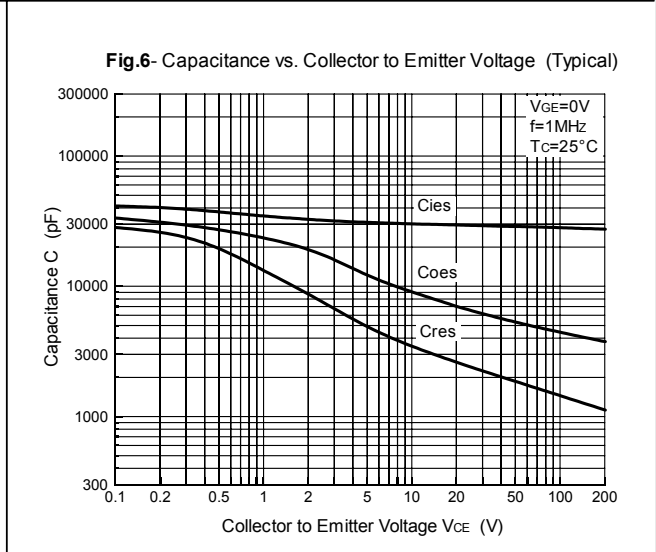
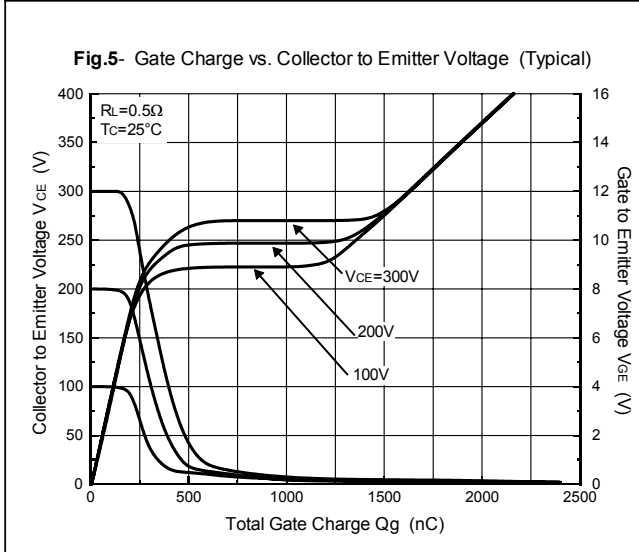
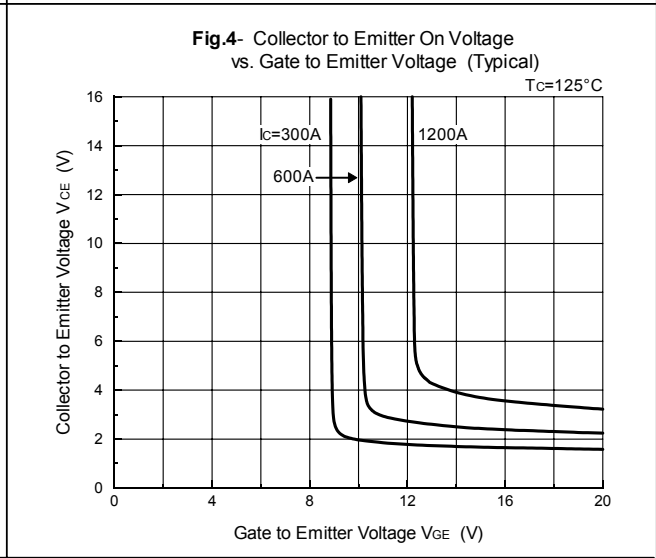
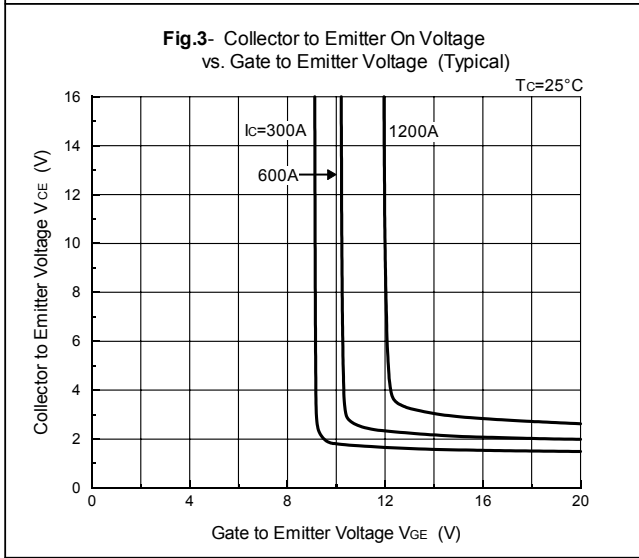
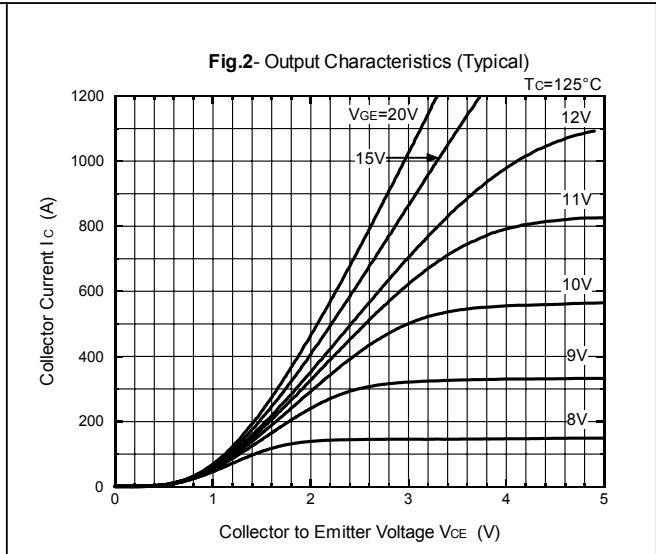
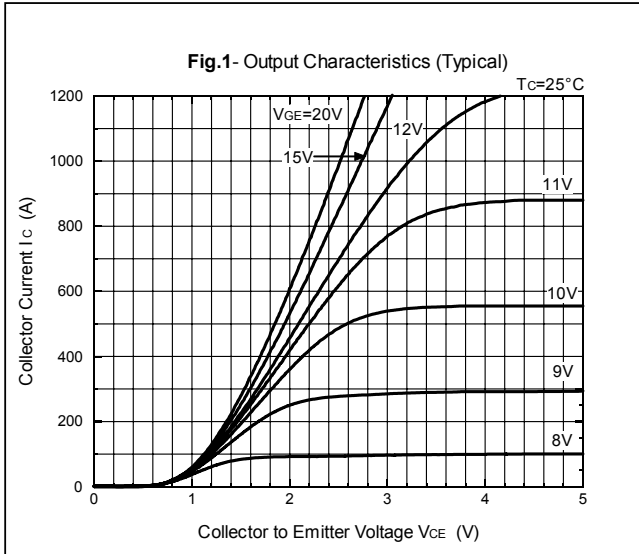
Item	Symbol	Rated Value	Unit
順電流 Forward Current	DC	I <sub>F</sub>	600
	1ms	I <sub>FM</sub>	1,200

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
順電圧 Peak Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 600A, V <sub>GE</sub> = 0V	-	1.9	2.4	V
逆回復時間 Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> = 600A, V <sub>GE</sub> = -10V di/dt = 1200A/μs	-	0.15	0.25	μs

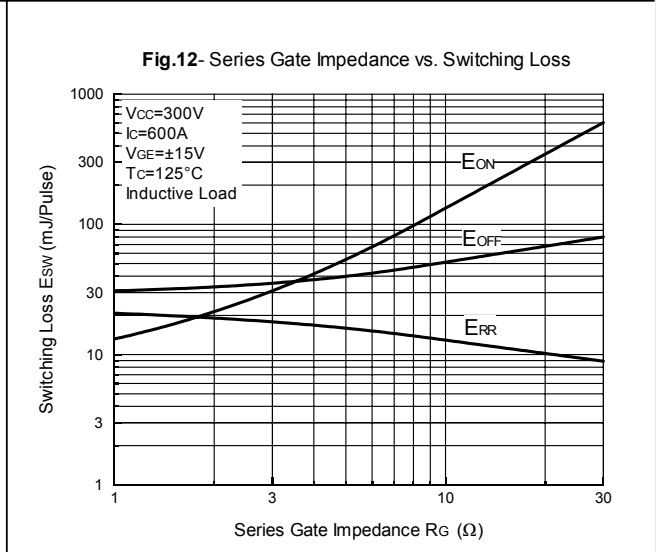
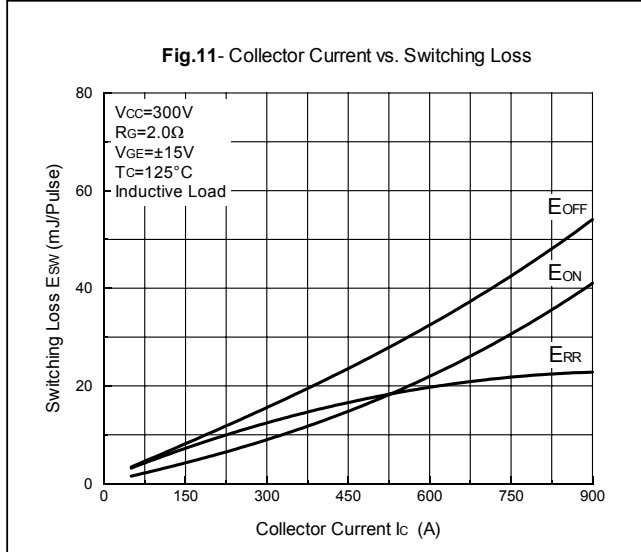
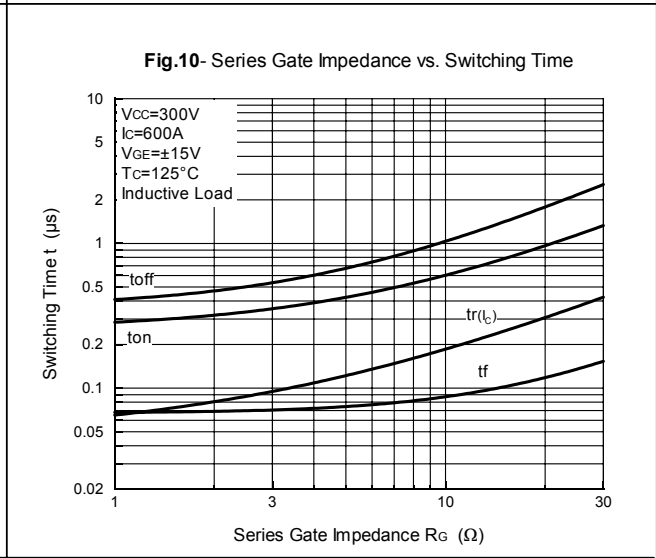
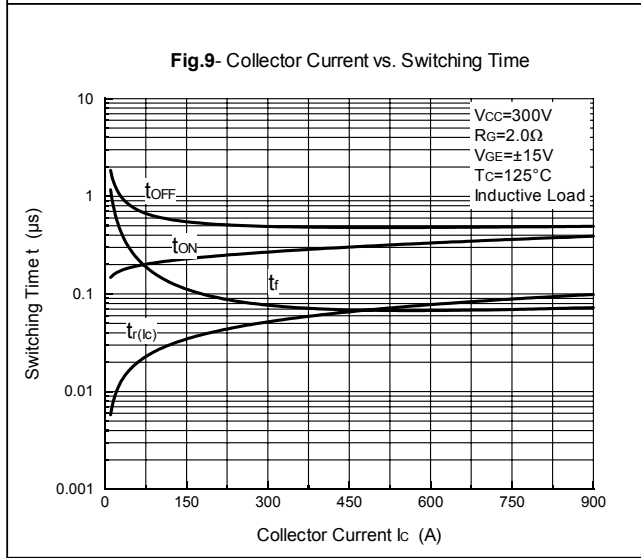
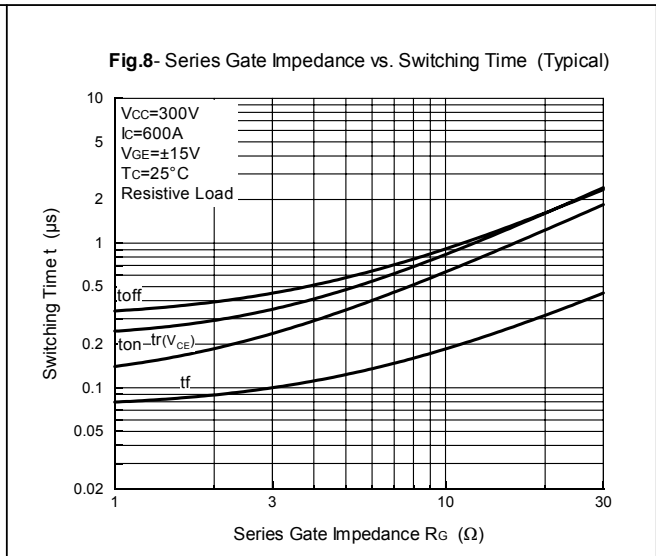
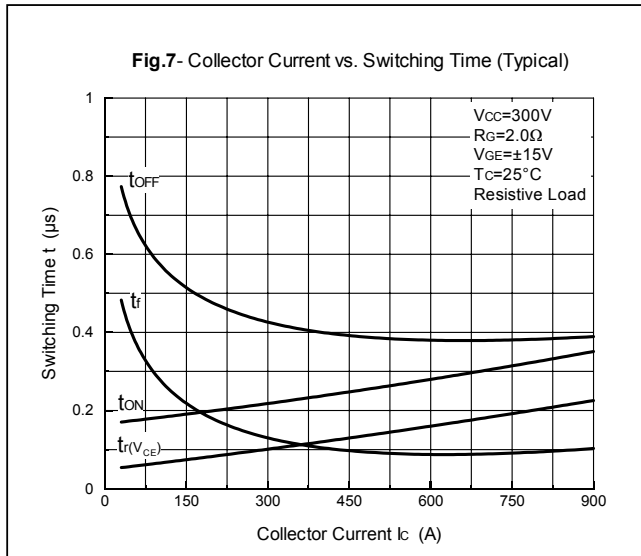
熱的特性 : THERMAL CHARACTERISTICS

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
熱抵抗 Thermal Impedance	R <sub>th(j-c)</sub>	IGBT	-	-	0.06	°C/W
		Diode	-	-	0.14	

PHMB600E6  
PHMB600E6C



PHMB600E6  
PHMB600E6C



PHMB600E6  
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