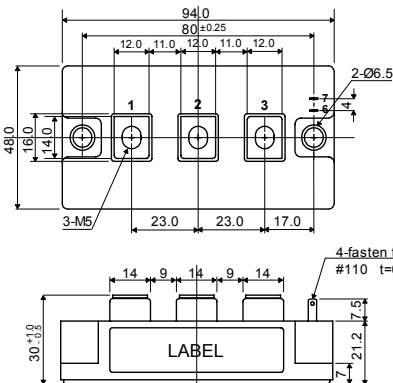
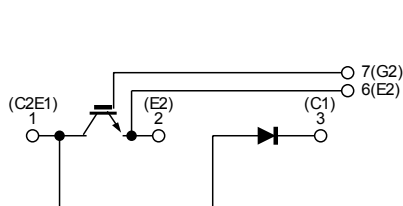
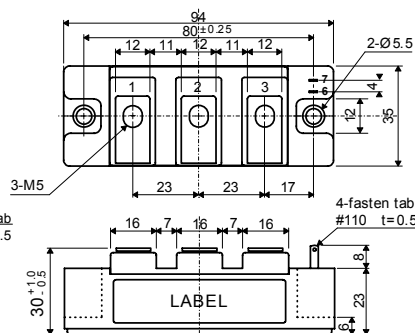


□ 回路図 : CIRCUIT

□ 外形寸法図 : OUTLINE DRAWING



PRHMB150E6



PRHMB150E6C

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} | 6 0 0 | | | V | |
| ゲート・エミッタ間電圧 Gate-Emitter Voltage | | V _{GES} | ± 2 0 | | | V | |
| コレクタ電流 Collector Current | DC | I _C | 1 5 0 | | | A | |
| | 1 m s | I _{CP} | 3 0 0 | | | | |
| コレクタ損失 Collector Power Dissipation | | P _C | 5 6 0 | | | W | |
| 接 合 温 度 Junction Temperature Range | | T _j | － 4 0 ～ ＋ 1 5 0 | | | ℃ | |
| 保 存 温 度 Storage Temperature Range | | T _{stg} | － 4 0 ～ ＋ 1 2 5 | | | ℃ | |
| 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} | PDMB150E6 | 3 (30.6) | PDMB150E6C | 3 (30.6) | N・m (kgf・cm) |
| | Busbar to Main Terminal | | | 3 (30.6) | | 2 (20.4) | |

□ 電気的特性 : ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$)

| 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} | $V_{GE} = \pm 20V, V_{CE} = 0V$ | — | — | 1.0 | μA |
| コレクタ・エミッタ間飽和電圧 Collector-Emitter Saturation Voltage | | $V_{CE(sat)}$ | $I_C = 150A, V_{GE} = 15V$ | — | 2.1 | 2.6 | V |
| ゲートしきい値電圧 Gate-Emitter Threshold Voltage | | $V_{GE(th)}$ | $V_{CE} = 5V, I_C = 150mA$ | 4.0 | — | 8.0 | V |
| 入力容量 Input Capacitance | | C_{ies} | $V_{CE} = 10V, V_{GE} = 0V, f = 1MHz$ | — | 7,500 | — | pF |
| スイッチング時間 Switching Time | 上昇時間 Rise Time | t_r | $V_{CC} = 300V$ $R_L = 2.0\Omega$ $R_G = 5.1\Omega$ $V_{GE} = \pm 15V$ | — | 0.15 | 0.30 | μs |
| | ターンオン時間 Turn-on Time | t_{on} | | — | 0.25 | 0.40 | |
| | 下降時間 Fall Time | t_f | | — | 0.10 | 0.35 | |
| | ターンオフ時間 Turn-off Time | t_{off} | | — | 0.35 | 0.70 | |

□ 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 | 150 | | A | |
| | 1ms | I _{FM} | 300 | | | |

| C h a r a c t e r i s t i c | | S y m b o l | T e s t C o n d i t i o n | Min. | T y p. | Max. | U n i t |
|--------------------------------|--|-----------------|--|------|--------|------|---------|
| 順電圧 Peak Forward Voltage | | V _F | I _F = 150A, V _{GE} = 0V | — | 1.9 | 2.4 | V |
| 逆回復時間 Reverse Recovery Time | | t _{rr} | I _F = 150A, V _{GE} = -10V di/dt = 300A/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 | IGBT | $R_{th(j-c)}$ | Junction to Case (T_c 測定点チップ直下) | — | — | 0.22 | $^\circ\text{C}/\text{W}$ |
| | Diode | | | — | — | 0.45 | |

Fig.1- Output Characteristics (Typical)

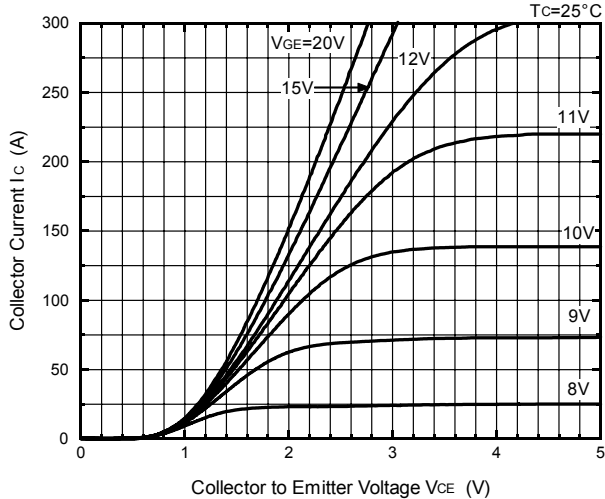


Fig.2- Output Characteristics (Typical)

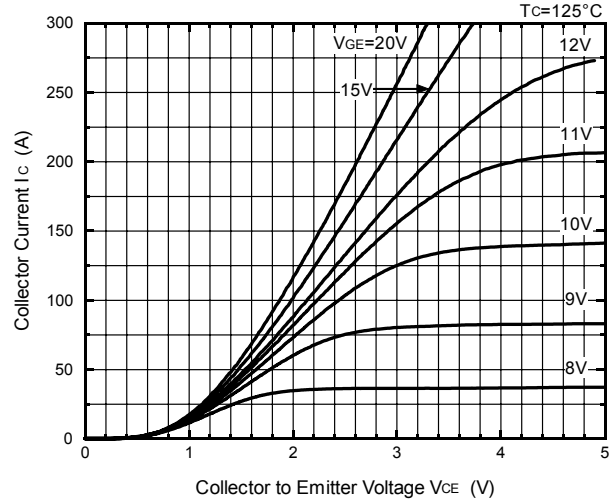


Fig.3- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

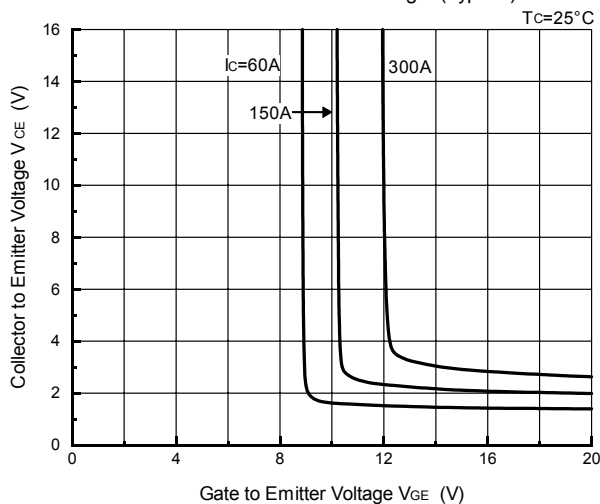


Fig.4- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

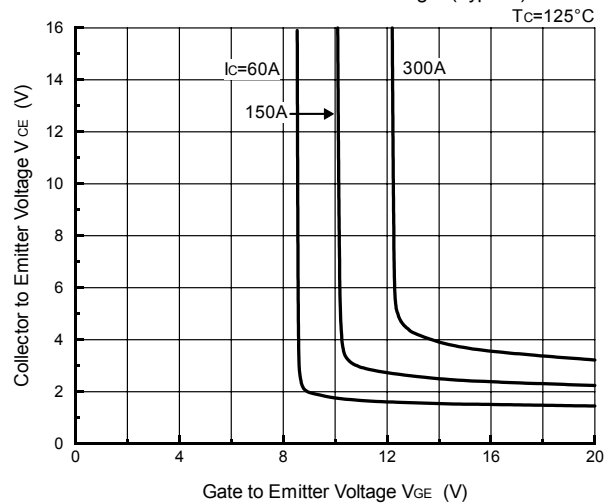


Fig.5- Gate Charge vs. Collector to Emitter Voltage (Typical)

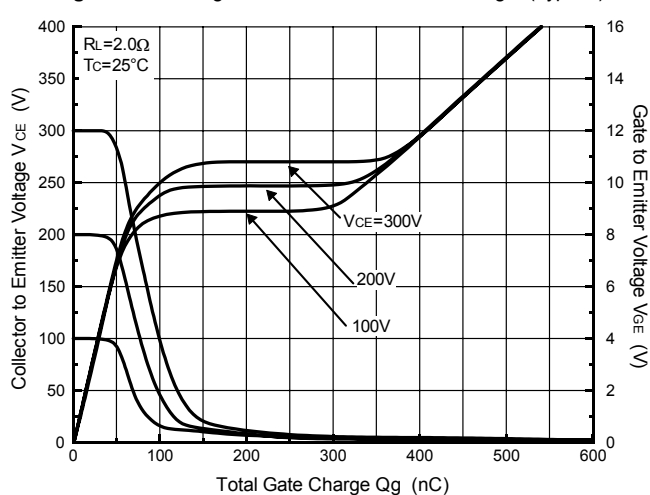


Fig.6- Capacitance vs. Collector to Emitter Voltage (Typical)

