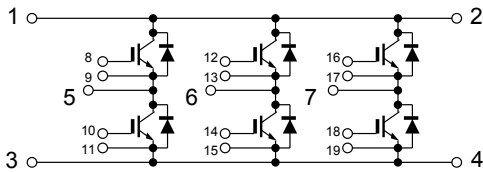
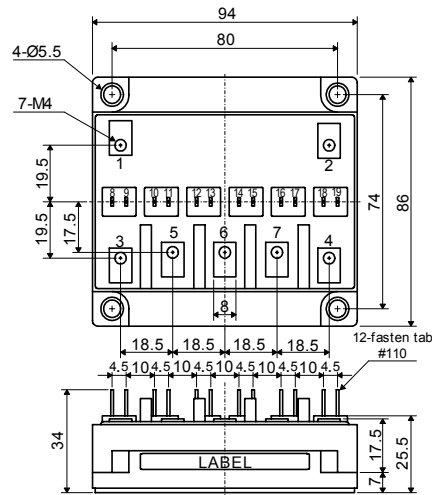


□ 回路図 : *CIRCUIT*



□ 外形寸法図 : *OUTLINE DRAWING*



Dimension: [mm]

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

| Item | Symbol | Rated Value | Unit |
|--|-------------------------|-----------------|------------------|
| コレクタ・エミッタ間電圧 Collector-Emitter Voltage | V_{CES} | 1,200 | 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 | 100 |
| | 1ms | I_{CP} | 200 |
| コレクタ損失 Collector Power Dissipation | P_C | 500 | 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} | 2,500 | V (RMS) |
| 締め付けトルク Mounting Torque | Module Base to Heatsink | 2 (20.4) | N·m |
| | Busbar to Main Terminal | 1.4 (14.3) | (kgf·cm) |

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

| Characteristic | Symbol | Test Condition | Min. | Tvp. | 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} | $V_{GE} = \pm 20V, V_{CE} = 0V$ | — | — | 1.0 | μA |
| コレクタ・エミッタ間飽和電圧 Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C = 100A, V_{GE} = 15V$ | — | 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 | $V_{CC} = 600V$ $R_L = 6\Omega$ $R_G = 10\Omega$ $V_{GE} = \pm 15V$ | — | 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 | |

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

| Item | Symbol | Rated Value | Unit |
|------------------------|--------|-------------|------|
| 順電流 Forward Current | DC | I_F | 100 |
| | 1ms | I_{FM} | 200 |

| Characteristic | Symbol | Test Condition | Min. | Tvp. | Max. | Unit |
|--------------------------------|----------|---|------|------|------|---------------|
| 順電圧 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} | $I_F = 100A, V_{GE} = -10V$ $di/dt = 200A/\mu\text{s}$ | — | 0.2 | 0.3 | μs |

□ 熱的特性 : *THERMAL CHARACTERISTICS*

| Characteristic | Symbol | Test Condition | Min. | Tvp. | Max. | Unit |
|--------------------------|--------|------------------|------|------|------|---------------------------|
| 熱抵抗 Thermal Impedance | IGBT | Junction to Case | — | — | 0.24 | $^\circ\text{C}/\text{W}$ |
| | Diode | | — | — | 0.42 | |

Fig.1- Output Characteristics (Typical)

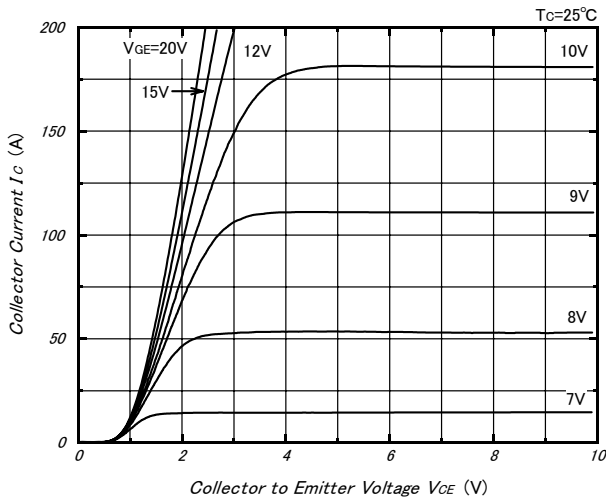


Fig.2- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

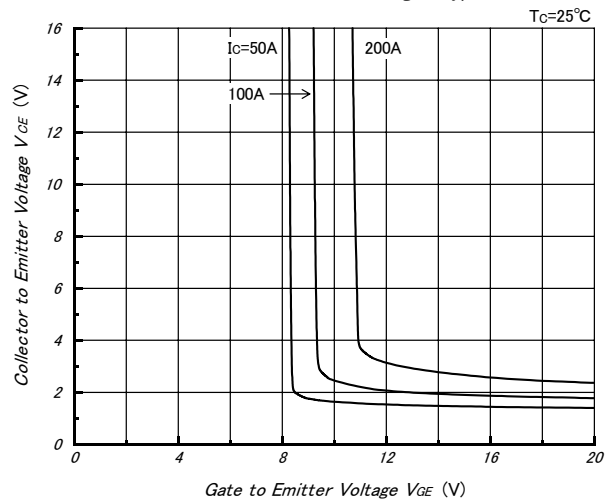


Fig.3- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

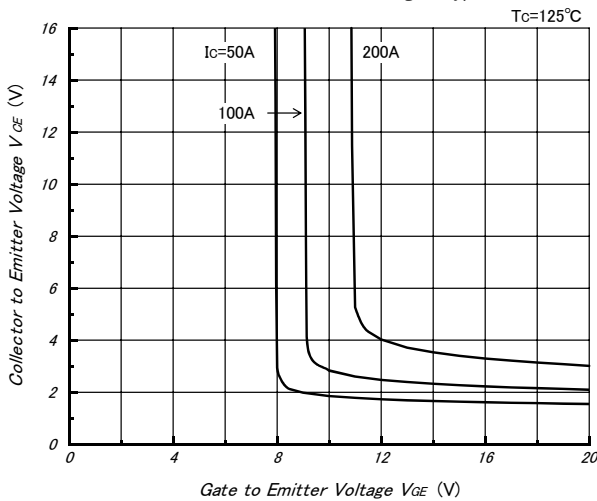


Fig.4- Gate Charge vs. Collector to Emitter Voltage (Typical)

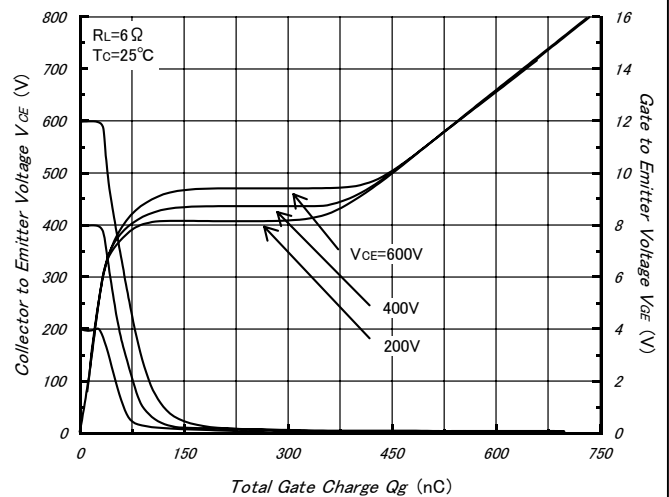


Fig.5- Capacitance vs. Collector to Emitter Voltage (Typical)

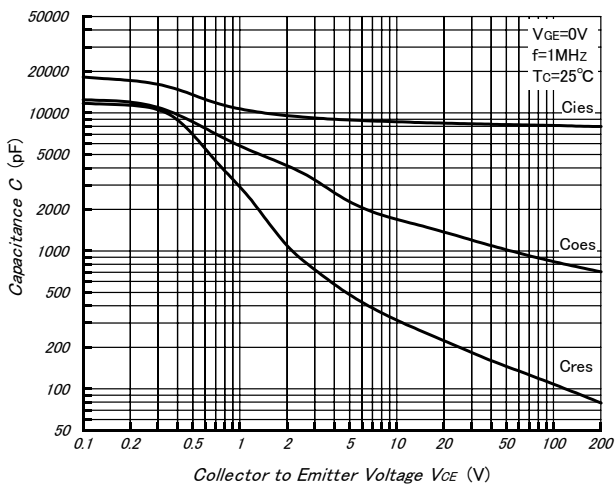


Fig.6- Collector Current vs. Switching Time (Typical)

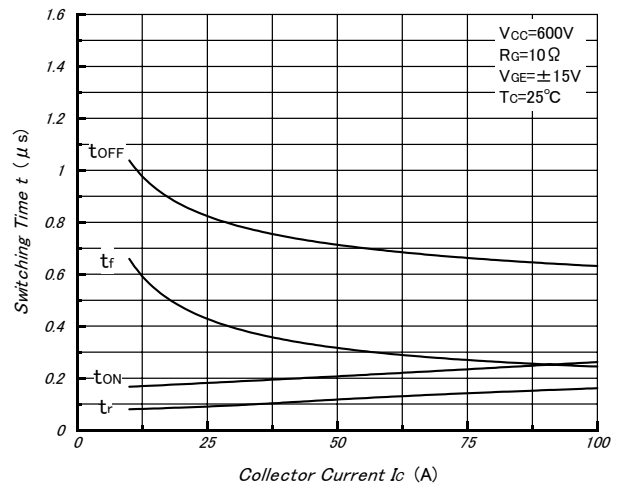


Fig.7- Series Gate Impedance vs. Switching Time (Typical)

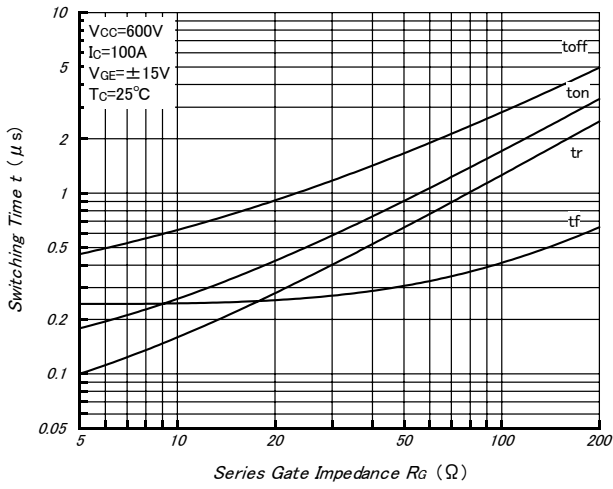


Fig.8- Forward Characteristics of Free Wheeling Diode (Typical)

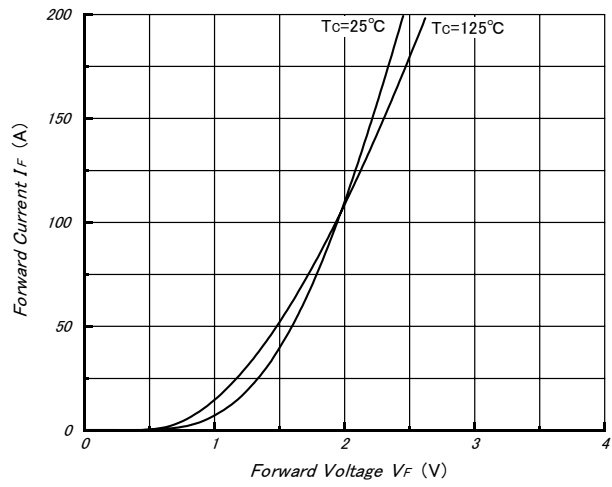


Fig.9- Reverse Recovery Characteristics (Typical)

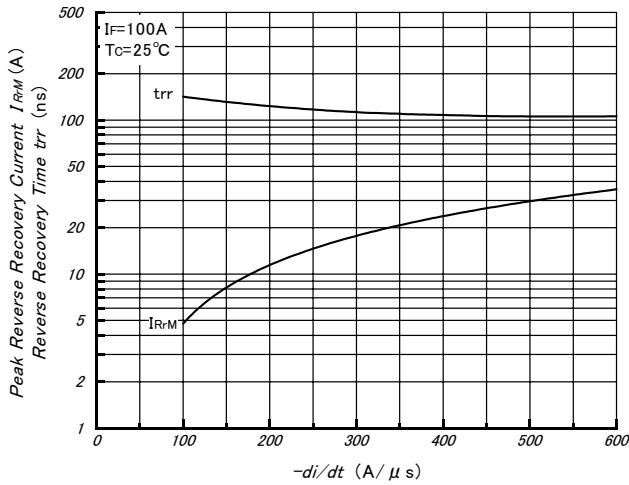


Fig.10- Reverse Bias Safe Operating Area

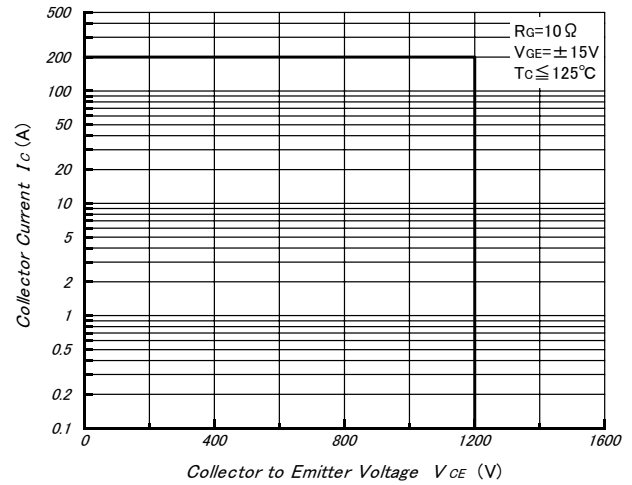


Fig.11- Transient Thermal Impedance

