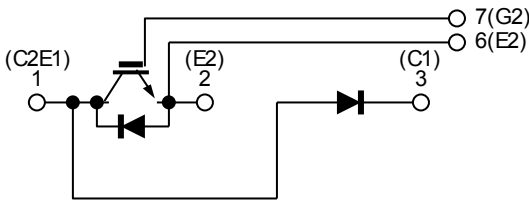
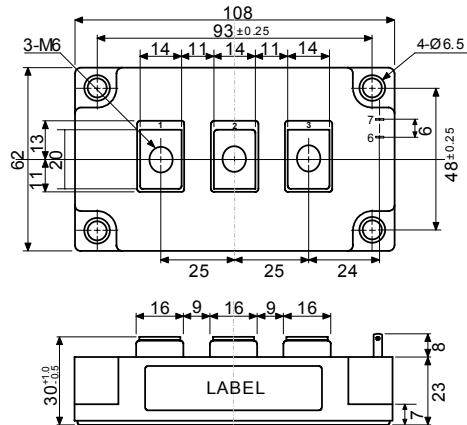


□ 回路図 : CIRCUIT



□ 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-Emittter Voltage | V _{CEs} | 1, 200 | V |
| ゲート・エミッタ間電圧 Gate-Emittter Voltage | V _{GES} | ±20 | V |
| コレクタ電流 Collector Current | DC | I _C | 400 |
| | 1ms | I _{CP} | 800 |
| コレクタ損失 Collector Power Dissipation | P _C | 1, 900 | 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 | Module Base to Heatsink | 3 (30.6) | N·m (kgf·cm) |
| | Busbar to Main Terminal | | |

□ 電気的特性 : ELECTRICAL CHARACTERISTICS (T_c=25°C)

| Characteristic | Symbol | Test Condition | Min. | Tvp. | Max. | Unit |
|---|-----------------------|--|------|--------|------|------|
| コレクタ遮断電流 Collector-Emittter Cut-Off Current | I _{CEs} | V _{CE} = 1200V, V _{GE} = 0V | - | - | 8.0 | mA |
| ゲート漏れ電流 Gate-Emittter 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-Emittter Saturation Voltage | V _{CE(sat)} | I _C = 400A, V _{GE} = 15V | - | 1.9 | 2.4 | V |
| ゲートしきい値電圧 Gate-Emittter Threshold Voltage | V _{GE(th)} | V _{CE} = 5V, I _C = 400mA | 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 _f = 1.5Ω R _g = 1Ω 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 | 400 | | | |
| | 1ms | I _{FM} | 800 | | | |
| Characteristic | Symbol | Test Condition | Min. | Tvp. | Max. | Unit |
| 順電圧 Peak Forward Voltage | V _F | I _F = 400A, V _{GE} = 0V | - | 1.9 | 2.4 | V |
| 逆回復時間 Reverse Recovery Time | t _{rr} | I _F = 400A, V _{GE} = -10V di/dt= 800A/μs | - | 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 | - | - | 0.065 | °C/W |
| | Diode | | - | - | 0.12 | |

Fig.1- Output Characteristics (Typical)

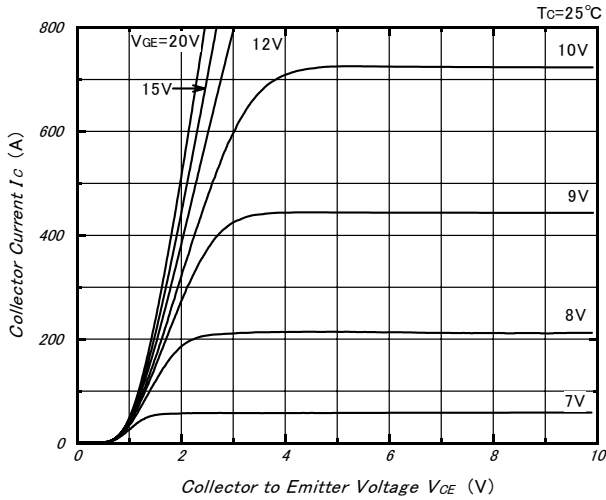


Fig.2- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

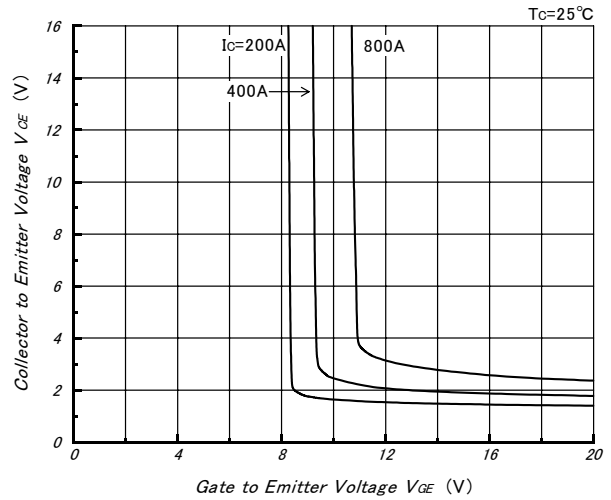


Fig.3- Collector to Emitter On Voltage vs. Gate to Emitter Voltage (Typical)

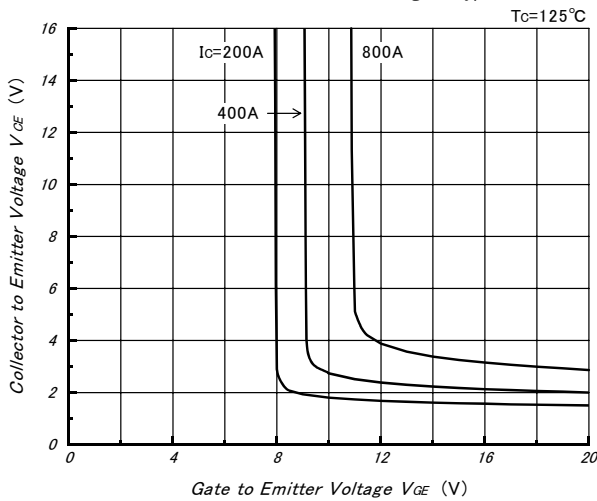


Fig.4- Gate Charge vs. Collector to Emitter Voltage (Typical)

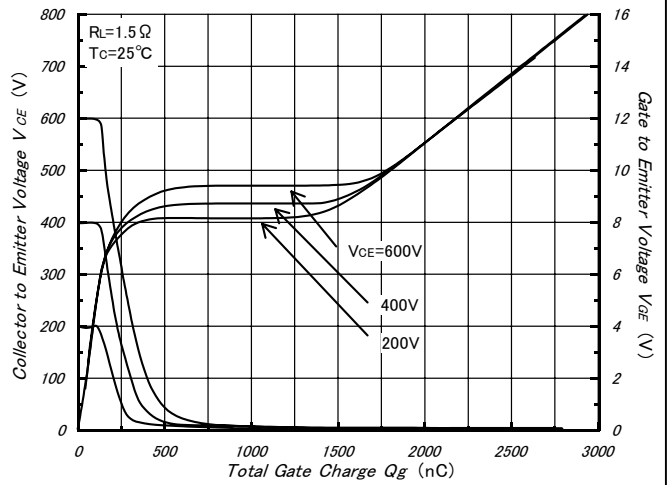


Fig.5- Capacitance vs. Collector to Emitter Voltage (Typical)

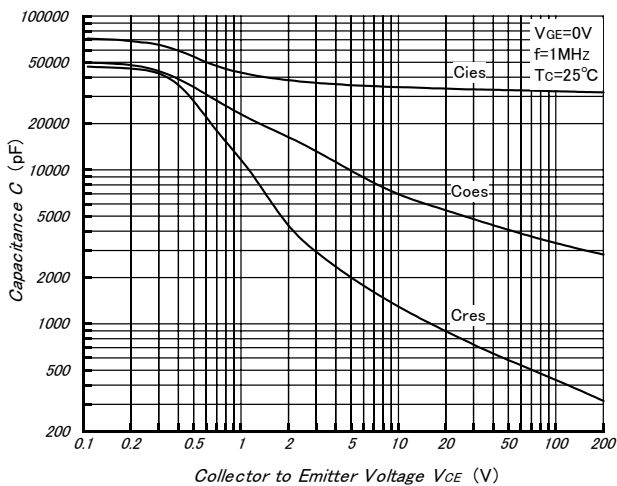


Fig.6- Collector Current vs. Switching Time (Typical)

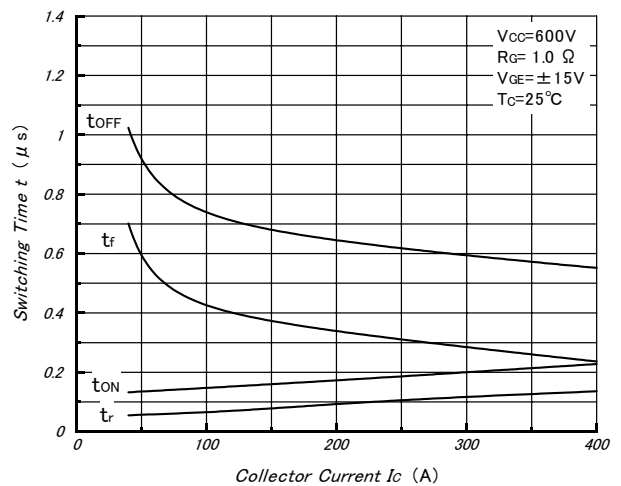


Fig.7- Series Gate Impedance vs. Switching Time (Typical)

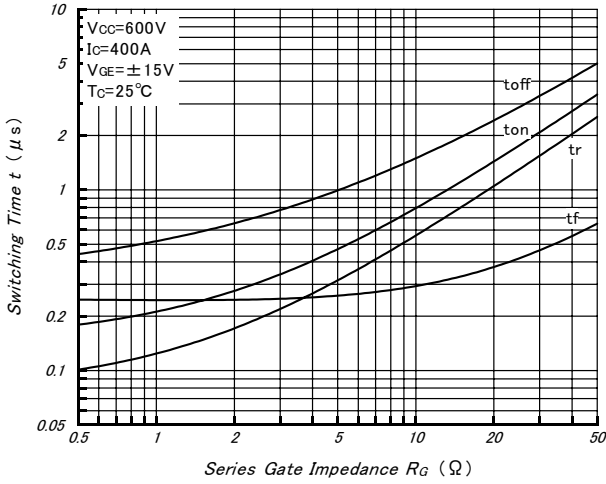


Fig.8- Forward Characteristics of Free Wheeling Diode (Typical)

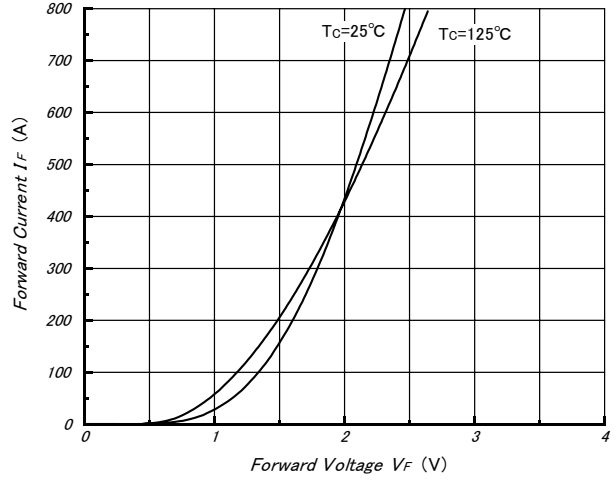


Fig.9- Reverse Recovery Characteristics (Typical)

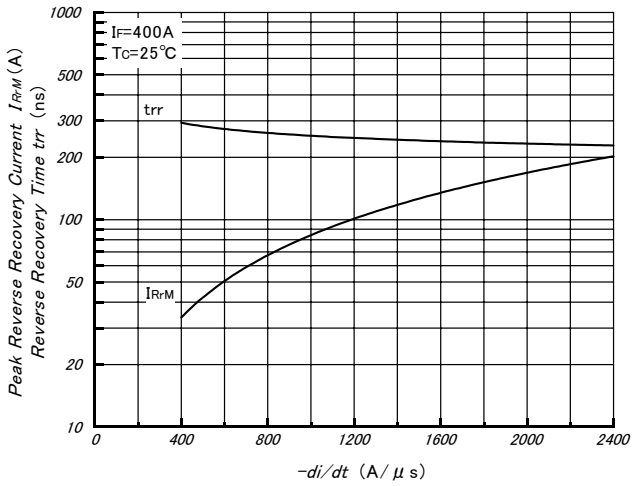


Fig.10- Reverse Bias Safe Operating Area

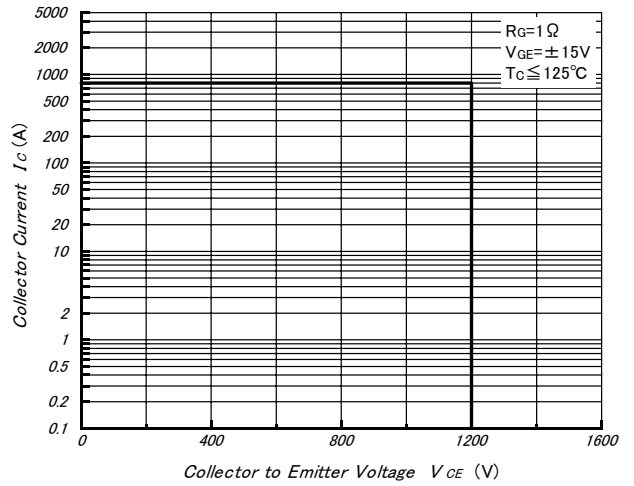


Fig.11- Transient Thermal Impedance

