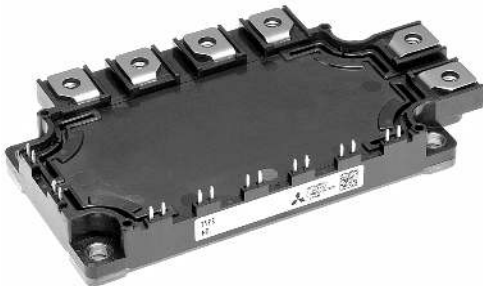


<IGBT Modules>

CM150RX-24S1

HIGH POWER SWITCHING USE
INSULATED TYPE



sevenpack (3φ Inverter + Brake Chopper)

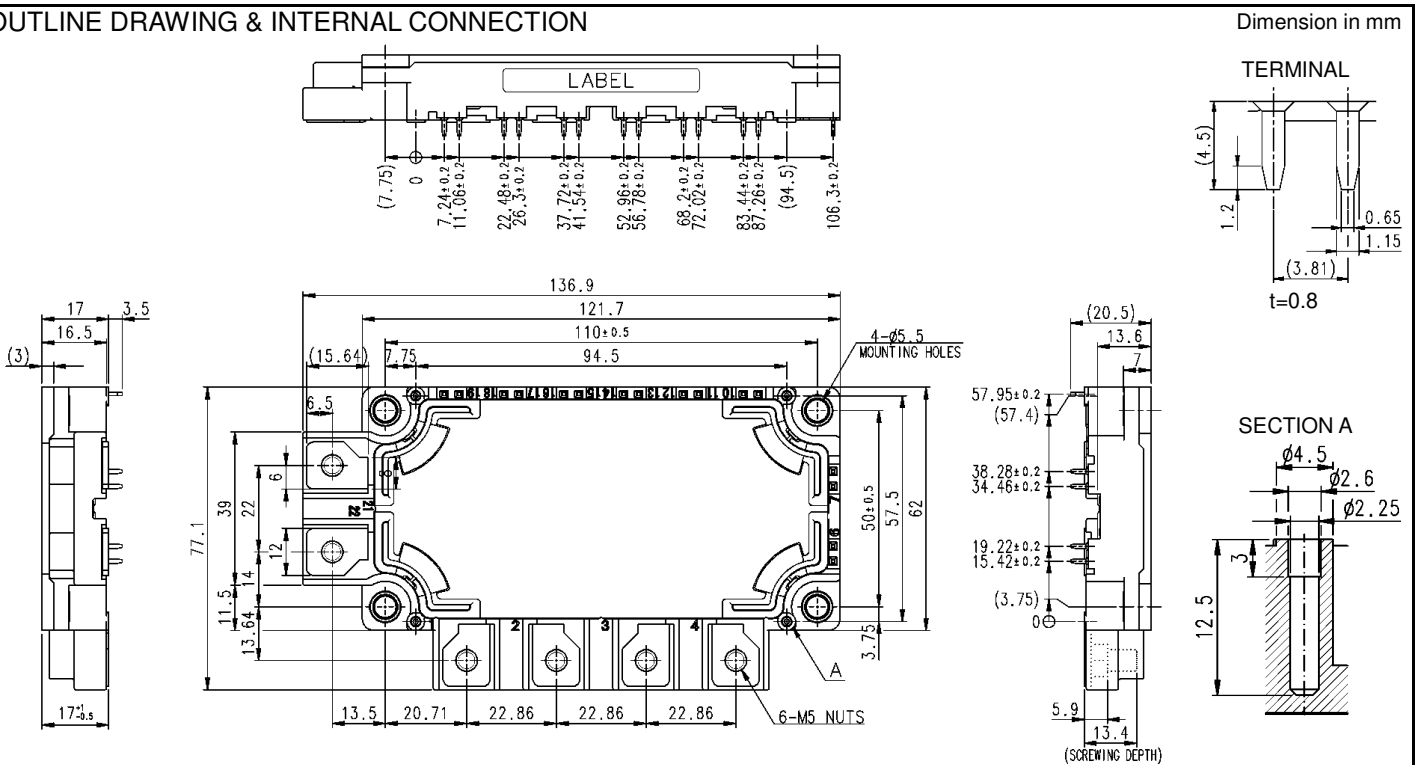
Collector current I_C 1 5 0 A
 Collector-emitter voltage V_{CES} 1 2 0 0 V
 Maximum junction temperature T_{jmax} 1 7 5 °C

- Flat base Type
- Copper base plate (non-plating)
- Tin plating pin terminals
- RoHS Directive* compliant
- Recognized under UL1557, File E323585

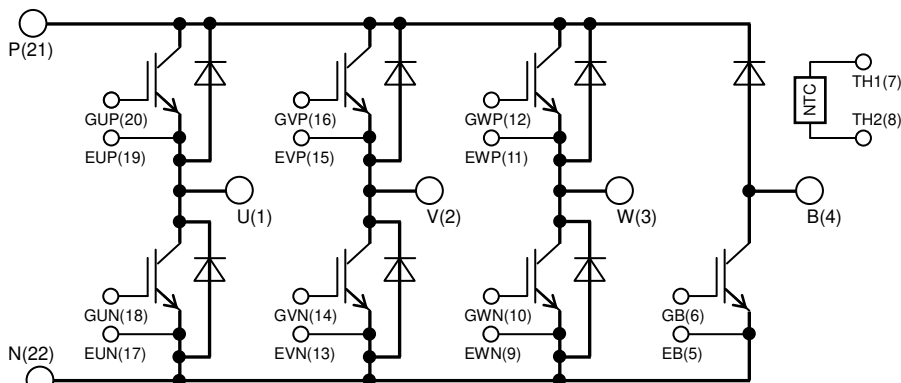
APPLICATION

AC Motor Control, Motion/Servo Control, etc.

OUTLINE DRAWING & INTERNAL CONNECTION



INTERNAL CONNECTION



Tolerance otherwise specified

| Division of Dimension | Tolerance |
|-----------------------|-----------|
| 0.5 to 3 | ±0.2 |
| over 3 to 6 | ±0.3 |
| over 6 to 30 | ±0.5 |
| over 30 to 120 | ±0.8 |
| over 120 to 400 | ±1.2 |

CM150RX-24S1

HIGH POWER SWITCHING USE
INSULATED TYPE

MAXIMUM RATINGS (T_j=25 °C, unless otherwise specified)

INVERTER PART IGBT/DIODE

| Symbol | Item | Conditions | Rating | Unit |
|--------------------------|---------------------------|---------------------------------------|--------|------|
| V _{CES} | Collector-emitter voltage | G-E short-circuited | 1200 | V |
| V _{GES} | Gate-emitter voltage | C-E short-circuited | ± 20 | V |
| I _C | Collector current | DC, T _C =107 °C (Note2, 4) | 150 | A |
| I _{CRM} | | Pulse, Repetitive (Note3) | 300 | |
| P _{tot} | Total power dissipation | T _C =25 °C (Note2, 4) | 935 | W |
| I _E (Note1) | Emitter current | DC (Note2) | 150 | A |
| I _{ERM} (Note1) | | Pulse, Repetitive (Note3) | 300 | |

BRAKE PART IGBT/DIODE

| Symbol | Item | Conditions | Rating | Unit |
|------------------|---------------------------------|---------------------------------------|--------|------|
| V _{CES} | Collector-emitter voltage | G-E short-circuited | 1200 | V |
| V _{GES} | Gate-emitter voltage | C-E short-circuited | ± 20 | V |
| I _C | Collector current | DC, T _C =109 °C (Note2, 4) | 75 | A |
| I _{CRM} | | Pulse, Repetitive (Note3) | 150 | |
| P _{tot} | Total power dissipation | T _C =25 °C (Note2, 4) | 480 | W |
| V _{RRM} | Repetitive peak reverse voltage | G-E short-circuited | 1200 | V |
| I _F | Forward current | DC (Note2) | 75 | A |
| I _{FRM} | | Pulse, Repetitive (Note3) | 150 | |

MODULE

| Symbol | Item | Conditions | Rating | Unit |
|-------------------|--------------------------------|---|------------|------|
| V _{isol} | Isolation voltage | Terminals to base plate, RMS, f=60 Hz, AC 1 min | 4000 | V |
| T _{jmax} | Maximum junction temperature | Instantaneous event (overload) | 175 | °C |
| T _{Cmax} | Maximum case temperature | (Note4) | 125 | |
| T _{jop} | Operating junction temperature | Continuous operation (under switching) | -40 ~ +150 | °C |
| T _{stg} | Storage temperature | - | -40 ~ +125 | |

ELECTRICAL CHARACTERISTICS (T_j=25 °C, unless otherwise specified)

INVERTER PART IGBT/DIODE

| Symbol | Item | Conditions | Limits | | | Unit | |
|----------------------------------|--------------------------------------|---|------------------------|------|------|------|---|
| | | | Min. | Typ. | Max. | | |
| I _{CES} | Collector-emitter cut-off current | V _{CE} =V _{CES} , G-E short-circuited | - | - | 1.0 | mA | |
| I _{GES} | Gate-emitter leakage current | V _{GE} =V _{GES} , C-E short-circuited | - | - | 0.5 | µA | |
| V _{GE(th)} | Gate-emitter threshold voltage | I _C =15 mA, V _{CE} =10 V | 5.4 | 6.0 | 6.6 | V | |
| V _{CEsat} (Terminal) | Collector-emitter saturation voltage | I _C =150 A, V _{GE} =15 V, Refer to the figure of test circuit (Note5) | T _j =25 °C | - | 1.80 | 2.25 | V |
| | | | T _j =125 °C | - | 2.00 | - | |
| | | | T _j =150 °C | - | 2.05 | - | |
| V _{CEsat} (Chip) | Collector-emitter saturation voltage | I _C =150 A, V _{GE} =15 V, (Note5) | T _j =25 °C | - | 1.70 | 2.15 | V |
| | | | T _j =125 °C | - | 1.90 | - | |
| | | | T _j =150 °C | - | 1.95 | - | |
| C _{ies} | Input capacitance | V _{CE} =10 V, G-E short-circuited | - | - | 15 | nF | |
| C _{oes} | Output capacitance | | - | - | 3.0 | | |
| C _{res} | Reverse transfer capacitance | | - | - | 0.25 | | |
| Q _G | Gate charge | V _{CC} =600 V, I _C =150 A, V _{GE} =15 V | - | 315 | - | nC | |
| t _{d(on)} | Turn-on delay time | V _{CC} =600 V, I _C =150 A, V _{GE} =±15 V, R _G =0 Ω, Inductive load | - | - | 800 | ns | |
| t _r | Rise time | | - | - | 200 | | |
| t _{d(off)} | Turn-off delay time | | - | - | 600 | | |
| t _f | Fall time | | - | - | 300 | | |

CM150RX-24S1

HIGH POWER SWITCHING USE
INSULATED TYPE

ELECTRICAL CHARACTERISTICS (cont.; T_j=25 °C, unless otherwise specified)
INVERTER PART IGBT/DIODE

| Symbol | Item | Conditions | Limits | | | Unit | |
|---------------------------------------|-------------------------------------|---|------------------------|------|------|------|---|
| | | | Min. | Typ. | Max. | | |
| V _{EC} (Note1) (Terminal) | Emitter-collector voltage | I _E =150 A, G-E short-circuited, Refer to the figure of test circuit (Note5) | T _j =25 °C | - | 2.60 | 3.40 | V |
| | | | T _j =125 °C | - | 2.16 | - | |
| | | | T _j =150 °C | - | 2.10 | - | |
| V _{EC} (Note1) (Chip) | | I _E =150 A, G-E short-circuited, (Note5) | T _j =25 °C | - | 2.50 | 3.30 | V |
| | | | T _j =125 °C | - | 2.06 | - | |
| | | | T _j =150 °C | - | 2.00 | - | |
| t _{rr} (Note1) | Reverse recovery time | V _{CC} =600 V, I _E =150 A, V _{GE} =±15 V, | - | - | 300 | ns | |
| Q _{rr} (Note1) | Reverse recovery charge | R _G =0 Ω, Inductive load | - | 4.0 | - | μC | |
| E _{on} | Turn-on switching energy per pulse | V _{CC} =600 V, I _C =I _E =150 A, | - | 16.6 | - | mJ | |
| E _{off} | Turn-off switching energy per pulse | V _{GE} =±15 V, R _G =0 Ω, T _j =150 °C, | - | 17.6 | - | | |
| E _{rr} (Note1) | Reverse recovery energy per pulse | Inductive load | - | 10.8 | - | mJ | |
| R _{CC'+EE'} | Internal lead resistance | Main terminals-chip, per switch, T _C =25 °C (Note4) | - | - | 0.7 | mΩ | |
| r _g | Internal gate resistance | Per switch | - | 13 | - | Ω | |

BRAKE PART IGBT/DIODE

| Symbol | Item | Conditions | Limits | | | Unit | |
|----------------------------------|--------------------------------------|--|------------------------|------|------|------|---|
| | | | Min. | Typ. | Max. | | |
| I _{CES} | Collector-emitter cut-off current | V _{CE} =V _{CES} , G-E short-circuited | - | - | 1.0 | mA | |
| I _{GES} | Gate-emitter leakage current | V _{GE} =V _{GES} , C-E short-circuited | - | - | 0.5 | μA | |
| V _{GE(th)} | Gate-emitter threshold voltage | I _C =7.5 mA, V _{CE} =10 V | 5.4 | 6.0 | 6.6 | V | |
| V _{CEsat} (Terminal) | Collector-emitter saturation voltage | I _C =75 A, V _{GE} =15 V, Refer to the figure of test circuit (Note5) | T _j =25 °C | - | 1.80 | 2.25 | V |
| | | | T _j =125 °C | - | 2.00 | - | |
| | | | T _j =150 °C | - | 2.05 | - | |
| V _{CEsat} (Chip) | | I _C =75 A, V _{GE} =15 V, (Note5) | T _j =25 °C | - | 1.70 | 2.15 | V |
| | | | T _j =125 °C | - | 1.90 | - | |
| | | | T _j =150 °C | - | 1.95 | - | |
| C _{ies} | Input capacitance | V _{CE} =10 V, G-E short-circuited | - | - | 7.5 | nF | |
| C _{oes} | Output capacitance | | - | - | 1.5 | | |
| C _{res} | Reverse transfer capacitance | | - | - | 0.13 | | |
| Q _G | Gate charge | V _{CC} =600 V, I _C =75 A, V _{GE} =15 V | - | 158 | - | nC | |
| t _{d(on)} | Turn-on delay time | V _{CC} =600 V, I _C =75 A, V _{GE} =±15 V, R _G =8.2 Ω, Inductive load | - | - | 300 | ns | |
| t _r | Rise time | | - | - | 200 | | |
| t _{d(off)} | Turn-off delay time | | - | - | 600 | | |
| t _f | Fall time | | - | - | 300 | | |
| I _{RRM} | Repetitive peak reverse current | V _R =V _{RRM} , G-E short-circuited | - | - | 1.0 | mA | |
| V _F (Terminal) | Forward voltage | I _F =75 A, Refer to the figure of test circuit (Note5) | T _j =25 °C | - | 2.60 | 3.40 | V |
| | | | T _j =125 °C | - | 2.16 | - | |
| | | | T _j =150 °C | - | 2.10 | - | |
| V _F (Chip) | | I _F =75 A, (Note5) | T _j =25 °C | - | 2.50 | 3.30 | V |
| | | | T _j =125 °C | - | 2.06 | - | |
| | | | T _j =150 °C | - | 2.00 | - | |
| t _{rr} | Reverse recovery time | V _{CC} =600 V, I _E =75 A, V _{GE} =±15 V, | - | - | 300 | ns | |
| Q _{rr} | Reverse recovery charge | R _G =8.2 Ω, Inductive load | - | 2.0 | - | μC | |
| E _{on} | Turn-on switching energy per pulse | V _{CC} =600 V, I _C =I _E =75 A, | - | 3.5 | - | mJ | |
| E _{off} | Turn-off switching energy per pulse | V _{GE} =±15 V, R _G =8.2 Ω, T _j =150 °C, | - | 7.3 | - | | |
| E _{rr} | Reverse recovery energy per pulse | Inductive load | - | 6.5 | - | mJ | |
| r _g | Internal gate resistance | - | - | 0 | - | Ω | |

<IGBT Modules>
CM150RX-24S1

HIGH POWER SWITCHING USE
 INSULATED TYPE

ELECTRICAL CHARACTERISTICS (cont.; T_j=25 °C, unless otherwise specified)
 NTC THERMISTOR PART

| Symbol | Item | Conditions | Limits | | | Unit |
|----------------------|-------------------------|---|--------|------|------|------|
| | | | Min. | Typ. | Max. | |
| R ₂₅ | Zero-power resistance | T _C =25 °C (Note4) | 4.85 | 5.00 | 5.15 | kΩ |
| ΔR/R | Deviation of resistance | R ₁₀₀ =493 Ω, T _C =100 °C (Note4) | -7.3 | - | +7.8 | % |
| B _(25/50) | B-constant | Approximate by equation (Note6) | - | 3375 | - | K |
| P ₂₅ | Power dissipation | T _C =25 °C (Note4) | - | - | 10 | mW |

THERMAL RESISTANCE CHARACTERISTICS

| Symbol | Item | Conditions | Limits | | | Unit |
|-----------------------|----------------------------|---|--------|------|------|------|
| | | | Min. | Typ. | Max. | |
| R _{th(j-c)Q} | Thermal resistance | Junction to case, per Inverter IGBT (Note4) | - | - | 0.16 | K/W |
| R _{th(j-c)D} | | Junction to case, per Inverter DIODE (Note4) | - | - | 0.26 | |
| R _{th(j-c)Q} | | Junction to case, per Brake IGBT (Note4) | - | - | 0.31 | K/W |
| R _{th(j-c)D} | | Junction to case, per Brake DIODE (Note4) | - | - | 0.47 | |
| R _{th(c-s)} | Contact thermal resistance | Case to heat sink, per 1 module, Thermal grease applied (Note4, 7) | - | 15 | - | K/kW |

MECHANICAL CHARACTERISTICS

| Symbol | Item | Conditions | Limits | | | Unit |
|----------------|------------------------|---------------------------------|--------|------|------|------|
| | | | Min. | Typ. | Max. | |
| M _t | Mounting torque | Main terminals M 5 screw | 2.5 | 3.0 | 3.5 | N·m |
| M _s | Mounting torque | Mounting to heat sink M 5 screw | 2.5 | 3.0 | 3.5 | N·m |
| d _s | Creepage distance | Terminal to terminal | 17 | - | - | mm |
| | | Terminal to base plate | 20.1 | - | - | |
| d _a | Clearance | Terminal to terminal | 10 | - | - | mm |
| | | Terminal to base plate | 14.8 | - | - | |
| m | mass | - | - | 370 | - | g |
| e _c | Flatness of base plate | On the centerline X, Y (Note8) | ±0 | - | +100 | μm |

Note1. Represent ratings and characteristics of the anti-parallel, emitter-collector free wheeling diode (DIODE).

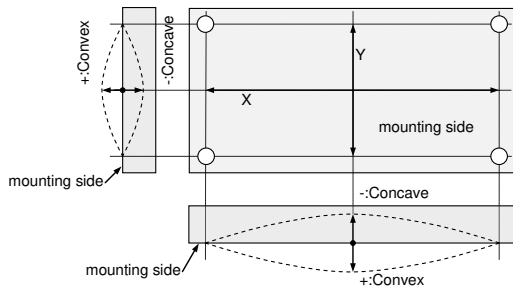
- Junction temperature (T_j) should not increase beyond T_{jmax} rating.
- Pulse width and repetition rate should be such that the device junction temperature (T_j) dose not exceed T_{jmax} rating.
- Case temperature (T_C) and heat sink temperature (T_s) are defined on the each surface (mounting side) of base plate and heat sink just under the chips. Refer to the figure of chip location.
- Pulse width and repetition rate should be such as to cause negligible temperature rise.

$$6. B_{(25/50)} = \ln\left(\frac{R_{25}}{R_{50}}\right) / \left(\frac{1}{T_{25}} - \frac{1}{T_{50}}\right),$$

R₂₅: resistance at absolute temperature T₂₅ [K]; T₂₅=25 [°C]+273.15=298.15 [K]

R₅₀: resistance at absolute temperature T₅₀ [K]; T₅₀=50 [°C]+273.15=323.15 [K]

- Typical value is measured by using thermally conductive grease of λ=0.9 W/(m·K).
- The base plate (mounting side) flatness measurement points (X, Y) are as follows of the following figure.



- Use the following screws when mounting the printed circuit board (PCB) on the standoffs.
 "φ2.6×10 or φ2.6×12, B1 tapping screw"
 The length of the screw depends on the thickness (t1.6~t2.0) of the PCB.

* This product is compliant with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS).

CM150RX-24S1

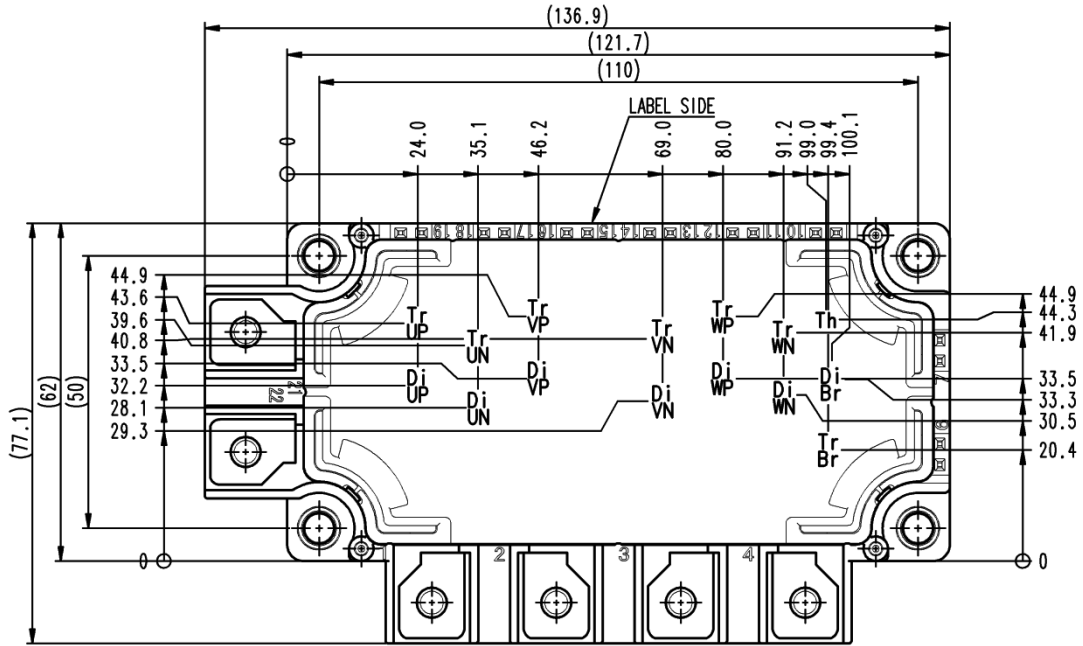
HIGH POWER SWITCHING USE
INSULATED TYPE

RECOMMENDED OPERATING CONDITIONS

| Symbol | Item | Conditions | Limits | | | Unit | |
|------------|-------------------------------|---|---------------|------|------|------|----------|
| | | | Min. | Typ. | Max. | | |
| V_{CC} | (DC) Supply voltage | Applied across P-N terminals | - | 600 | 850 | V | |
| V_{GEon} | Gate (-emitter drive) voltage | Applied across GB-EB/ G*P-E*P/G*N-E*N(*=U, V, W) terminals | 13.5 | 15.0 | 16.5 | V | |
| R_G | External gate resistance | Per switch | Inverter IGBT | 0 | - | 30 | Ω |
| | | | Brake IGBT | 8.2 | - | 82 | |

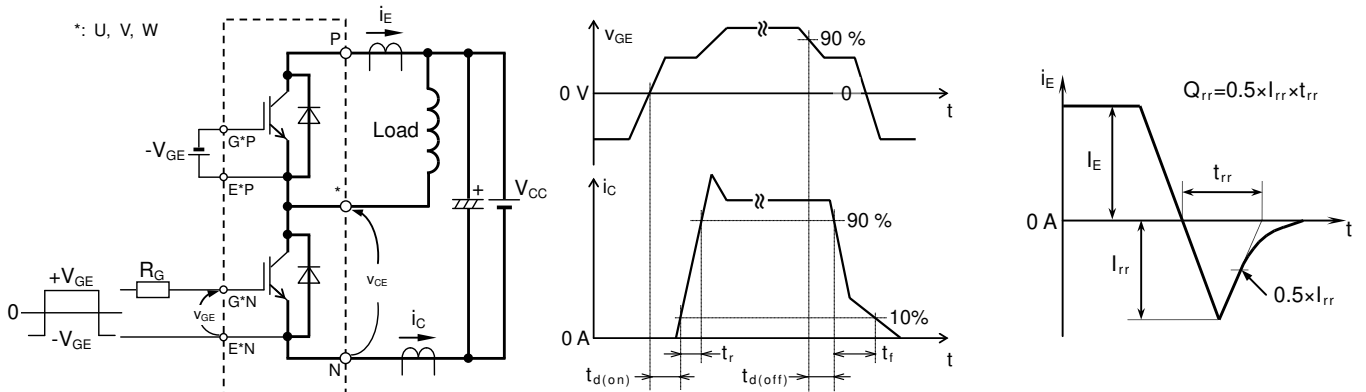
CHIP LOCATION (Top view)

Dimension in mm, tolerance: ± 1 mm



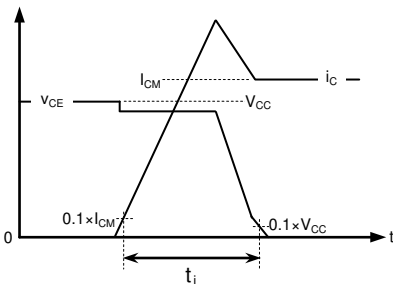
Tr*P/Tr*N/Tr*Br: IGBT, Di*P/Di*N: DIODE (*=U/V/W), Di*Br: Brake DIODE, Th: NTC thermistor

TEST CIRCUIT AND WAVEFORMS

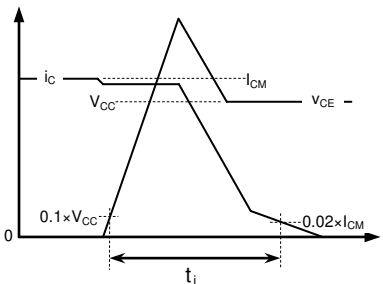


Switching test circuit and waveforms

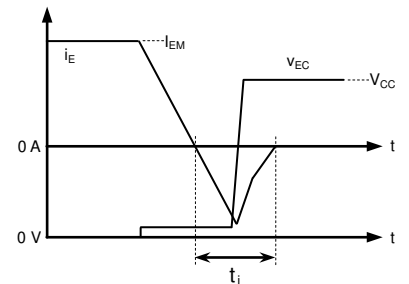
t_{rr} , Q_{rr} test waveform



IGBT Turn-on switching energy



IGBT Turn-off switching energy



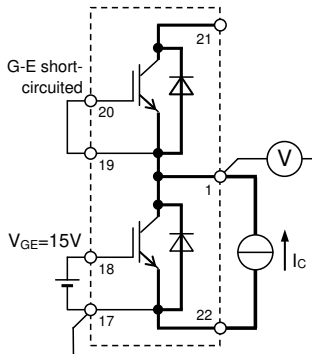
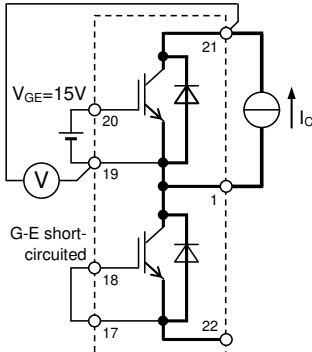
DIODE Reverse recovery energy

Turn-on / Turn-off switching energy and Reverse recovery energy test waveforms (Integral time instruction drawing)

CM150RX-24S1

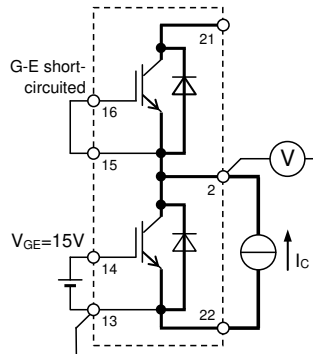
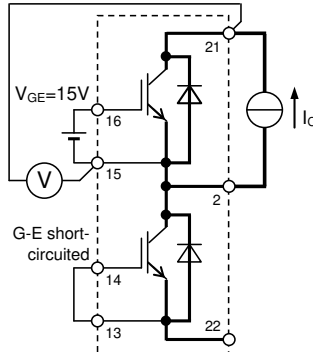
HIGH POWER SWITCHING USE
INSULATED TYPE

TEST CIRCUIT



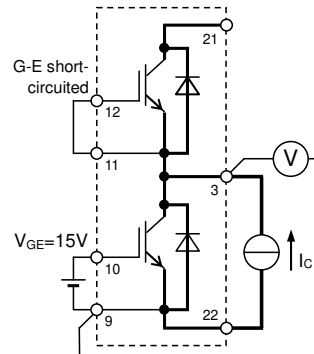
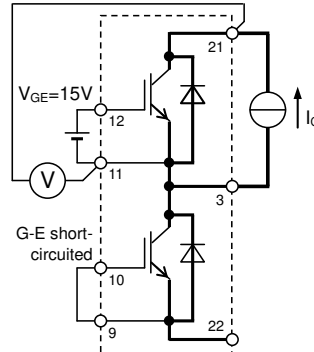
Gate-emitter GVP-EVP GVN-EVN,
short-circuited GWP-EWP, GWN-EWN,
GB-EB

UP / UN IGBT



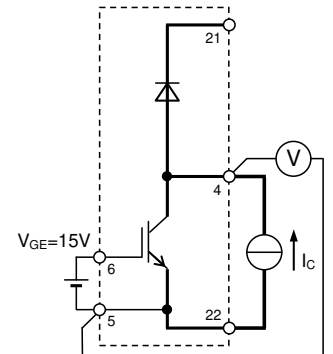
Gate-emitter GUP-EUP, GUN-EUN,
short-circuited GWP-EWP, GWN-EWN,
GB-EB

VP / VN IGBT



Gate-emitter GUP-EUP, GUN-EUN,
short-circuited GVP-EVP, GVN-EVN,
GB-EB

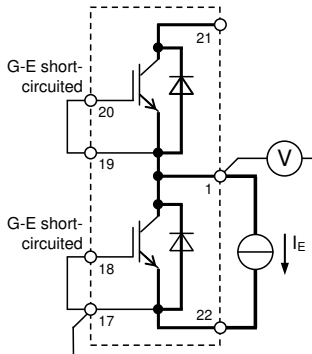
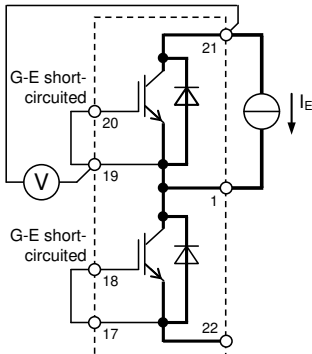
WP / WN IGBT



Gate-emitter GUP-EUP, GUN-EUN,
short-circuited GVP-EVP, GVN-EVN,
GWP-EWP, GWN-EWN

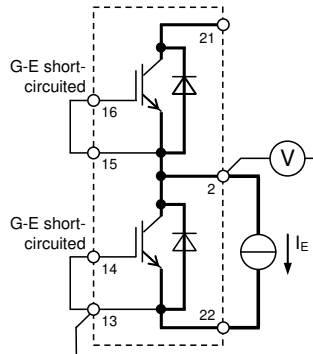
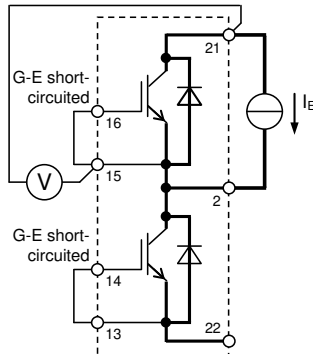
Brake IGBT

V_{CEsat} characteristics test circuit



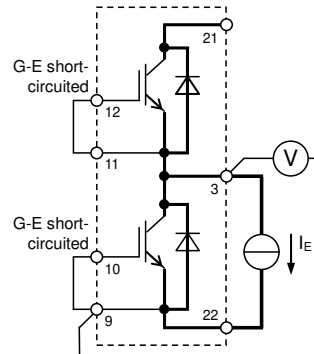
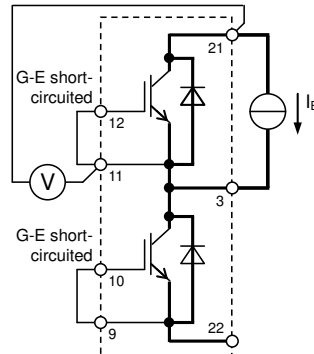
Gate-emitter GVP-EVP GVN-EVN,
short-circuited GWP-EWP, GWN-EWN,
GB-EB

UP / UN DIODE



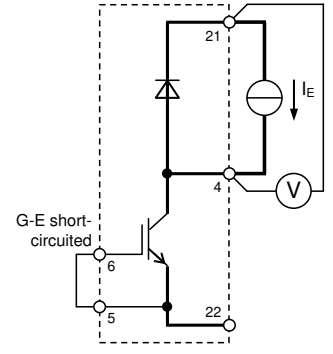
Gate-emitter GUP-EUP, GUN-EUN,
short-circuited GWP-EWP, GWN-EWN,
GB-EB

VP / VN DIODE



Gate-emitter GUP-EUP, GUN-EUN,
short-circuited GVP-EVP, GVN-EVN,
GB-EB

WP / WN DIODE



Gate-emitter GUP-EUP, GUN-EUN,
short-circuited GVP-EVP, GVN-EVN,
GWP-EWP, GWN-EWN

Brake DIODE

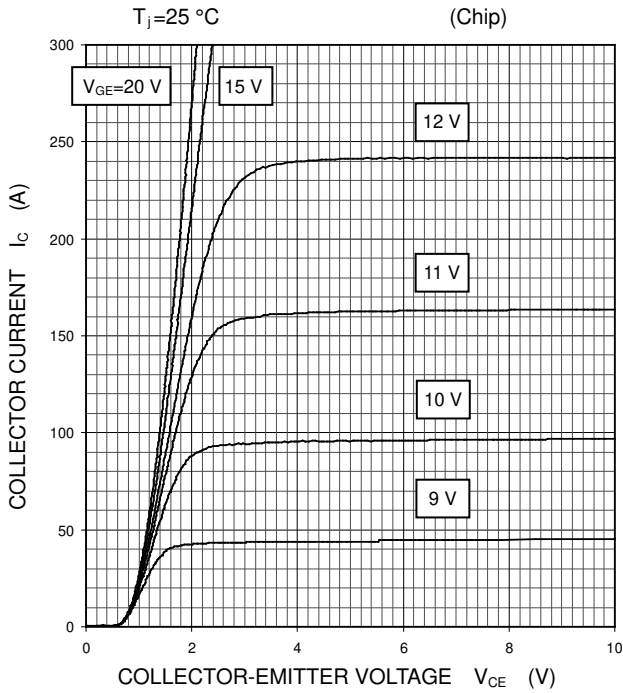
V_{EC} / V_F characteristics test circuit

CM150RX-24S1

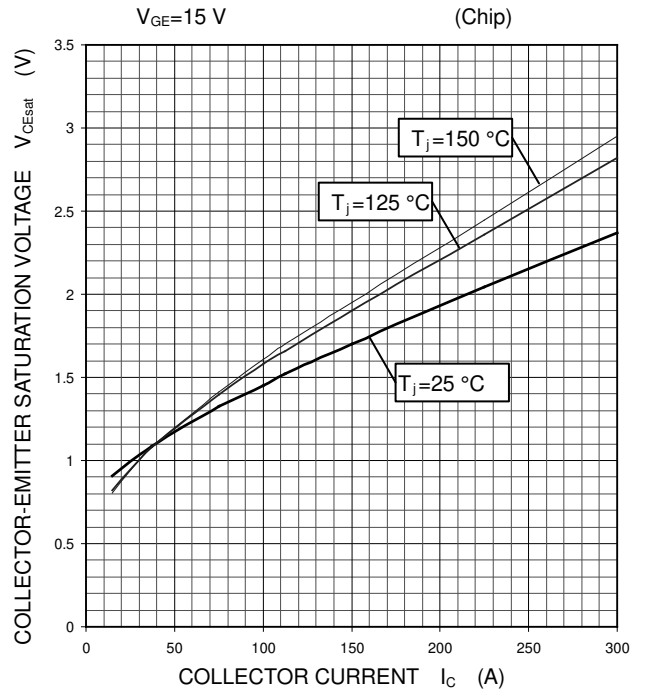
HIGH POWER SWITCHING USE
INSULATED TYPE

PERFORMANCE CURVES
INVERTER PART

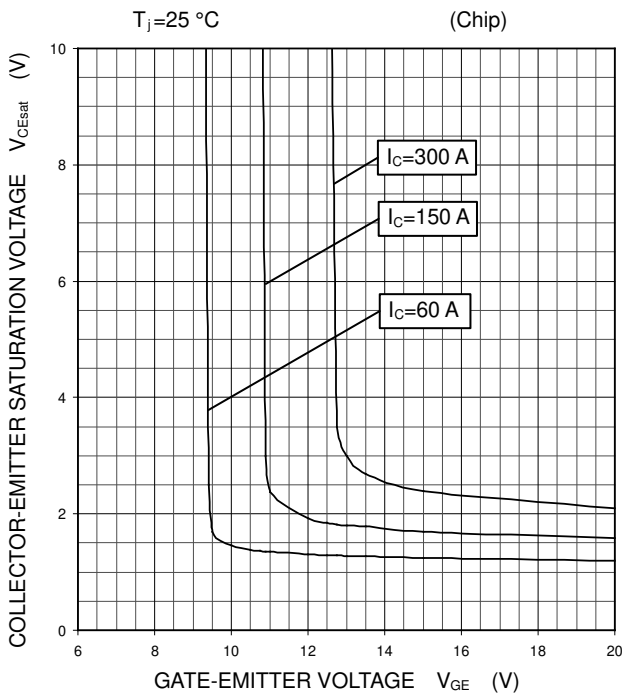
OUTPUT CHARACTERISTICS (TYPICAL)



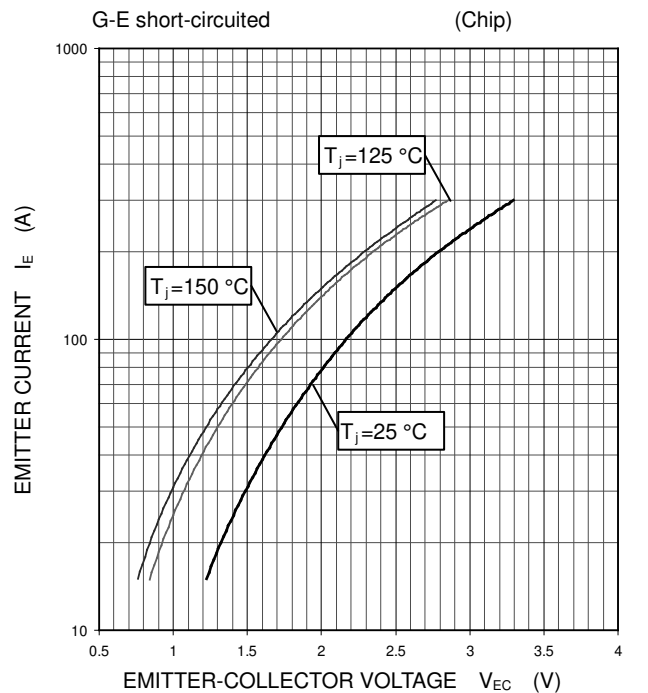
COLLECTOR-EMITTER SATURATION VOLTAGE CHARACTERISTICS (TYPICAL)



COLLECTOR-EMITTER SATURATION VOLTAGE CHARACTERISTICS (TYPICAL)



FREE WHEELING DIODE FORWARD CHARACTERISTICS (TYPICAL)



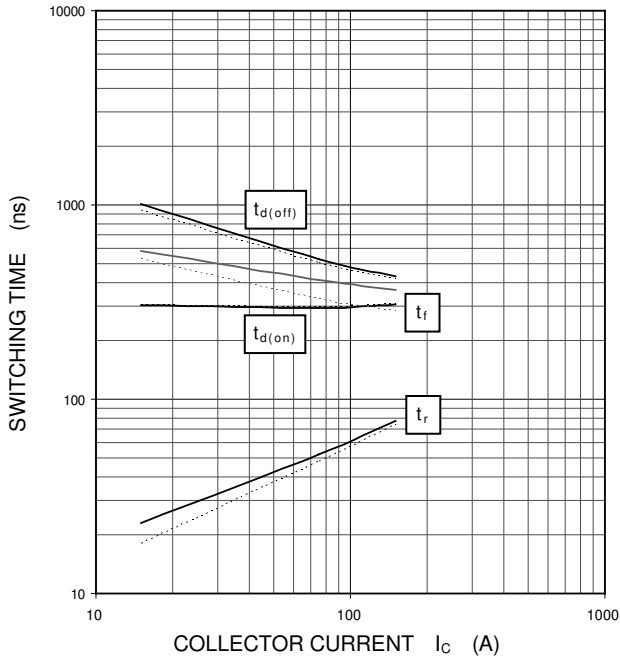
CM150RX-24S1

HIGH POWER SWITCHING USE
INSULATED TYPE

PERFORMANCE CURVES INVERTER PART

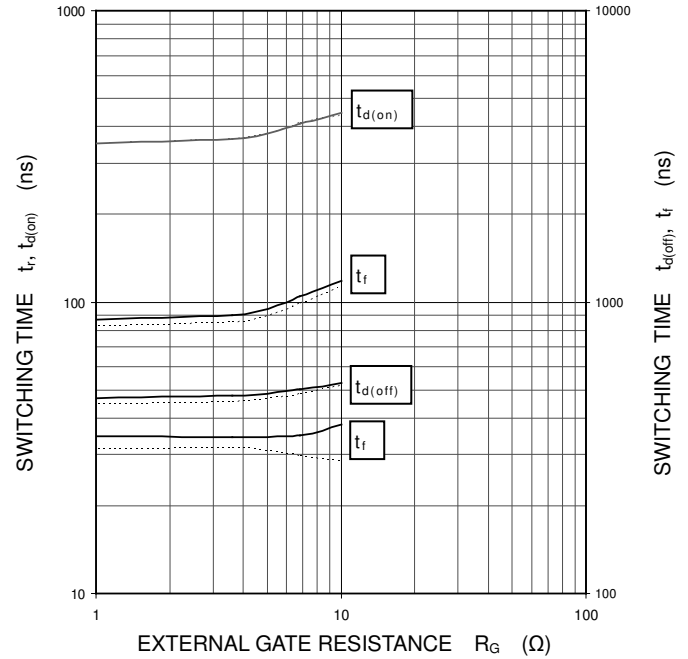
HALF-BRIDGE
SWITCHING CHARACTERISTICS
(TYPICAL)

$V_{CC}=600\text{ V}$, $V_{GE}=\pm 15\text{ V}$, $R_G=0\ \Omega$, INDUCTIVE LOAD
——: $T_j=150\text{ }^\circ\text{C}$, - - - - -: $T_j=125\text{ }^\circ\text{C}$



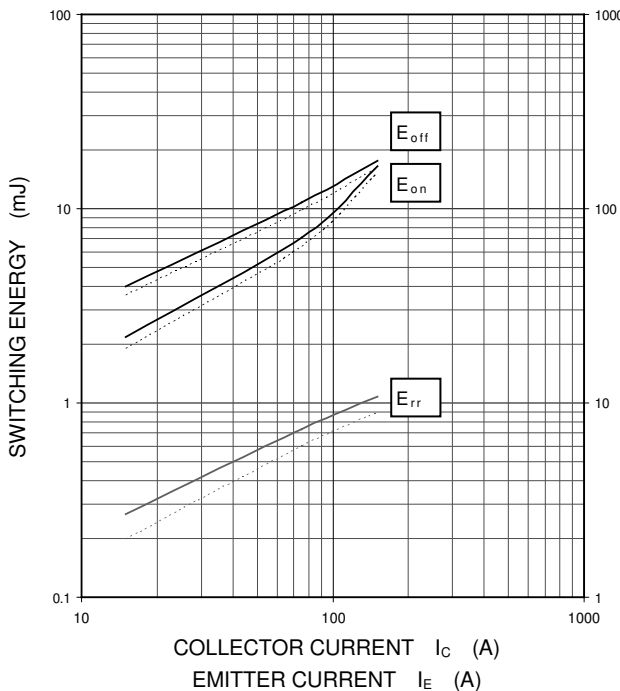
HALF-BRIDGE
SWITCHING CHARACTERISTICS
(TYPICAL)

$V_{CC}=600\text{ V}$, $V_{GE}=\pm 15\text{ V}$, $I_C=150\text{ A}$, INDUCTIVE LOAD
——: $T_j=150\text{ }^\circ\text{C}$, - - - - -: $T_j=125\text{ }^\circ\text{C}$



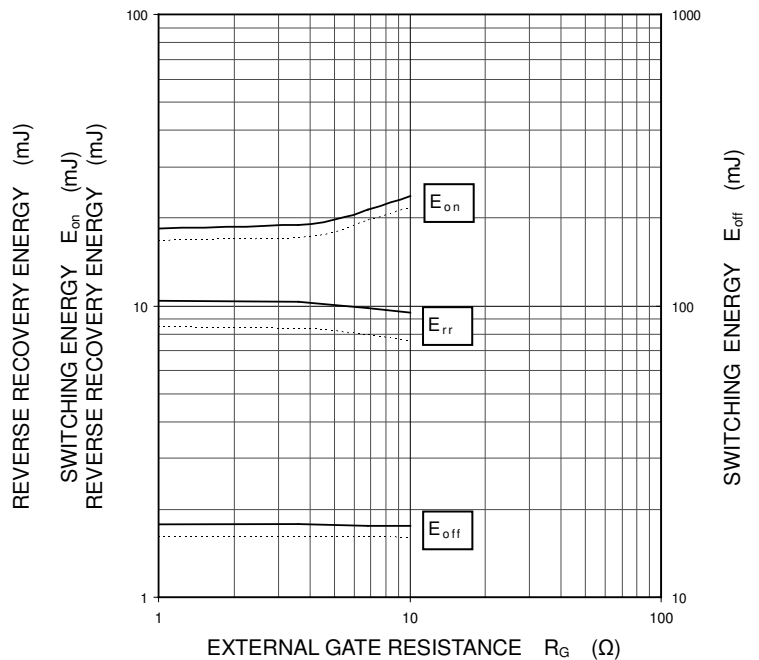
HALF-BRIDGE
SWITCHING CHARACTERISTICS
(TYPICAL)

$V_{CC}=600\text{ V}$, $V_{GE}=\pm 15\text{ V}$, $R_G=0\ \Omega$,
INDUCTIVE LOAD, PER PULSE
——: $T_j=150\text{ }^\circ\text{C}$, - - - - -: $T_j=125\text{ }^\circ\text{C}$



HALF-BRIDGE
SWITCHING CHARACTERISTICS
(TYPICAL)

$V_{CC}=600\text{ V}$, $V_{GE}=\pm 15\text{ V}$, $I_C/I_E=150\text{ A}$,
INDUCTIVE LOAD, PER PULSE
——: $T_j=150\text{ }^\circ\text{C}$, - - - - -: $T_j=125\text{ }^\circ\text{C}$

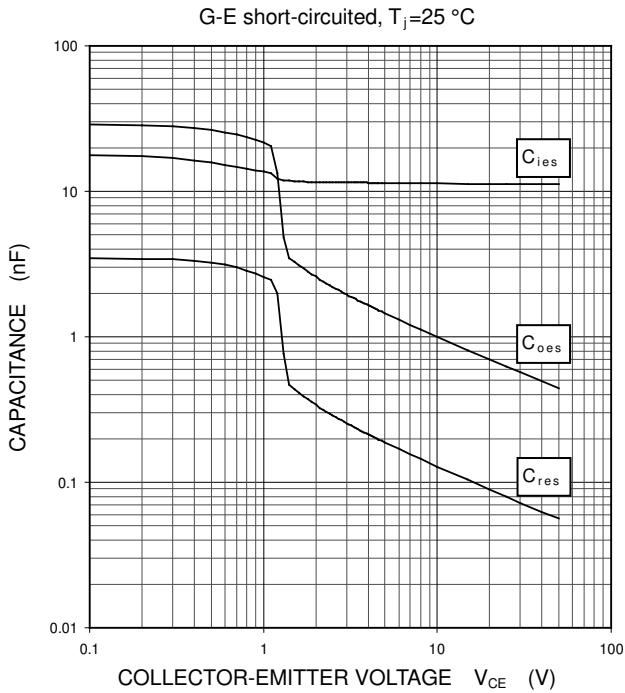


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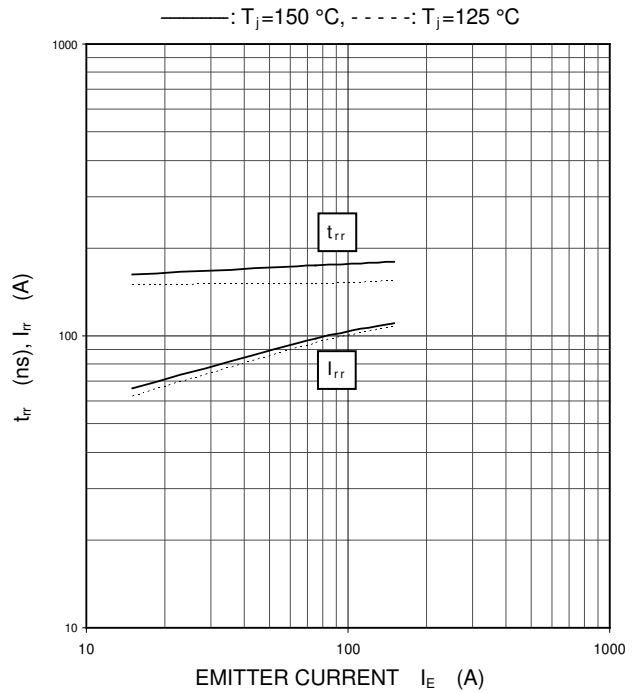
HIGH POWER SWITCHING USE
INSULATED TYPE

PERFORMANCE CURVES INVERTER PART

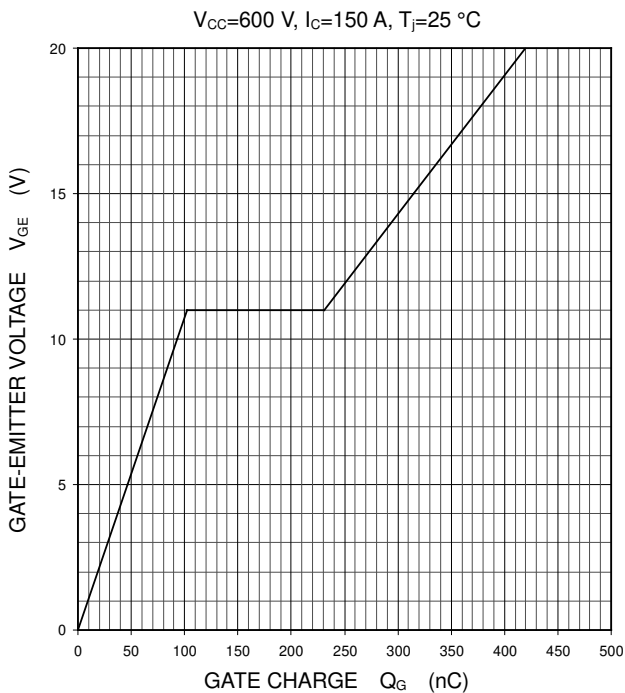
CAPACITANCE CHARACTERISTICS (TYPICAL)



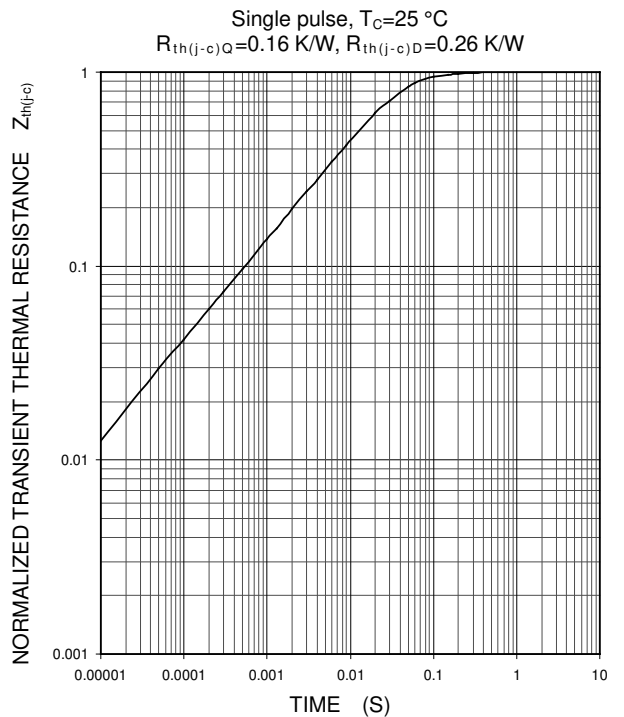
FREE WHEELING DIODE REVERSE RECOVERY CHARACTERISTICS (TYPICAL)
 $V_{CC}=600\text{ V}$, $V_{GE}=\pm 15\text{ V}$, $R_G=0\ \Omega$, INDUCTIVE LOAD



GATE CHARGE CHARACTERISTICS (TYPICAL)



TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS (MAXIMUM)



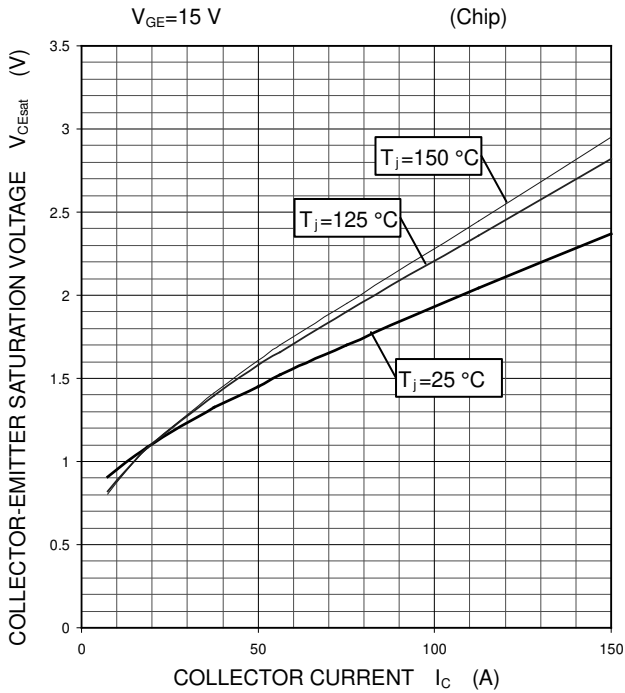
CM150RX-24S1

HIGH POWER SWITCHING USE
INSULATED TYPE

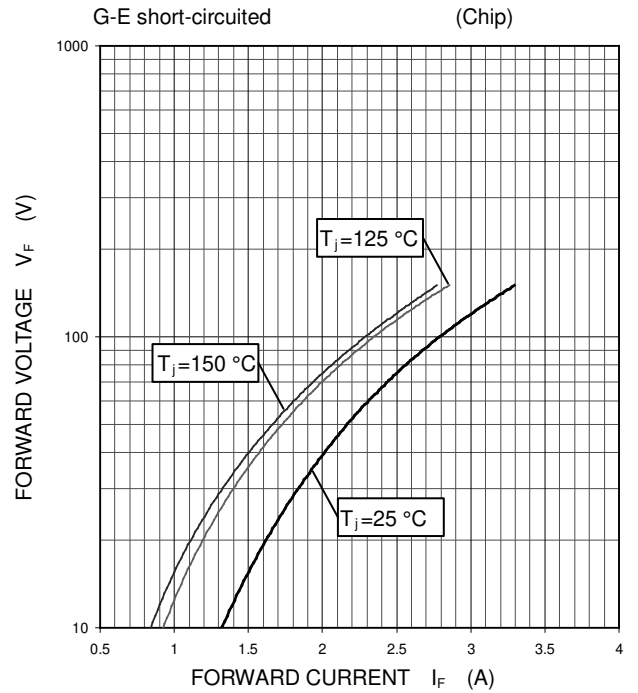
PERFORMANCE CURVES

BRAKE PART

COLLECTOR-EMITTER SATURATION
VOLTAGE CHARACTERISTICS
(TYPICAL)

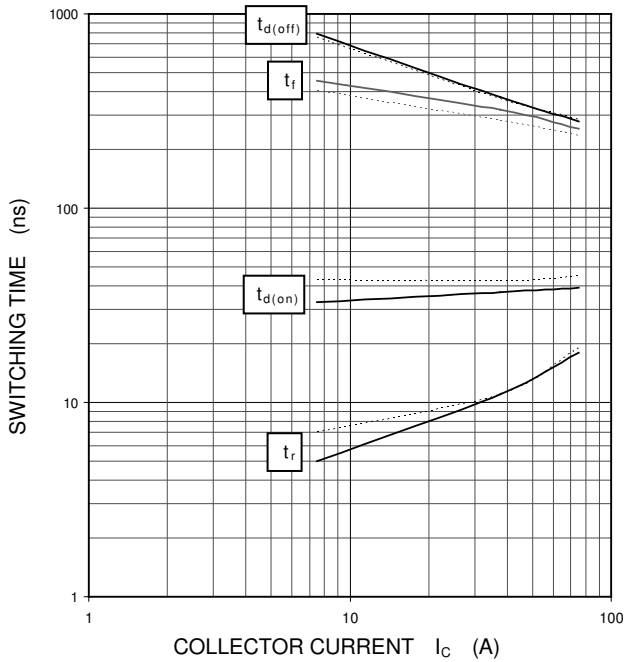


CLAMP DIODE
FORWARD CHARACTERISTICS
(TYPICAL)



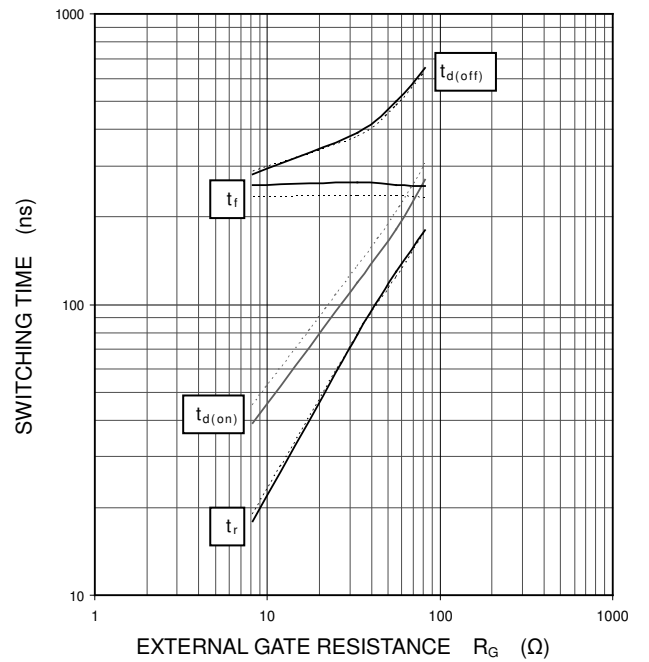
HALF-BRIDGE
SWITCHING CHARACTERISTICS
(TYPICAL)

$V_{CC}=600\text{ V}$, $V_{GE}=\pm 15\text{ V}$, $R_G=8.2\ \Omega$, INDUCTIVE LOAD
—: $T_j=150\text{ }^\circ\text{C}$, - - - -: $T_j=125\text{ }^\circ\text{C}$



HALF-BRIDGE
SWITCHING CHARACTERISTICS
(TYPICAL)

$V_{CC}=600\text{ V}$, $I_C=75\text{ A}$, $V_{GE}=\pm 15\text{ V}$, INDUCTIVE LOAD
—: $T_j=150\text{ }^\circ\text{C}$, - - - -: $T_j=125\text{ }^\circ\text{C}$

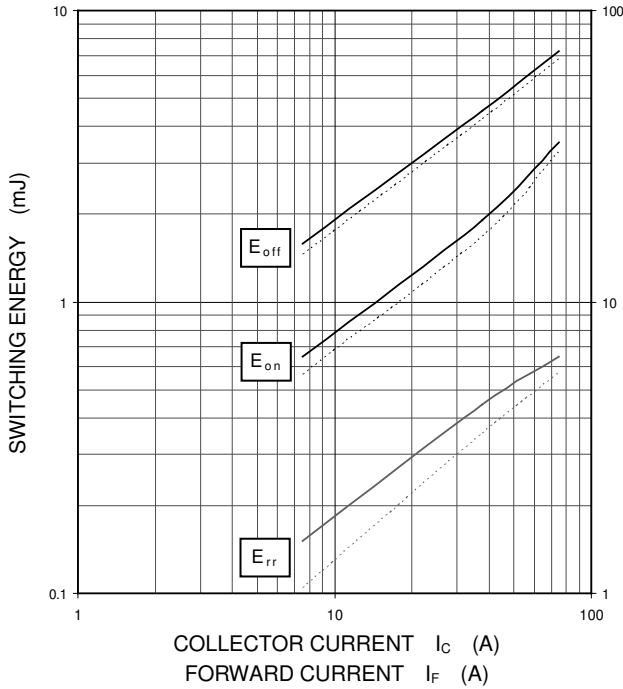


CM150RX-24S1

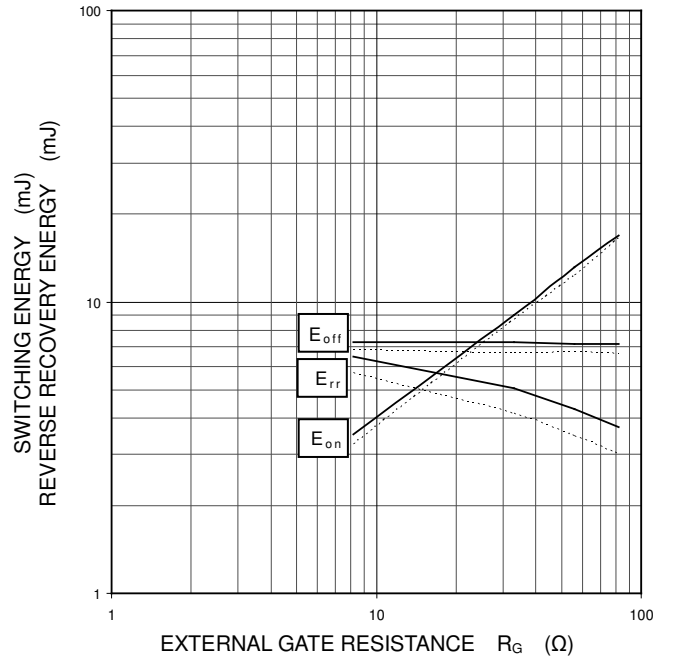
HIGH POWER SWITCHING USE
INSULATED TYPE

PERFORMANCE CURVES BRAKE PART

HALF-BRIDGE
SWITCHING CHARACTERISTICS
(TYPICAL)
 $V_{CC}=600\text{ V}$, $V_{GE}=\pm 15\text{ V}$, $R_G=8.2\ \Omega$,
INDUCTIVE LOAD, PER PULSE
——: $T_j=150\text{ }^\circ\text{C}$, - - - -: $T_j=125\text{ }^\circ\text{C}$

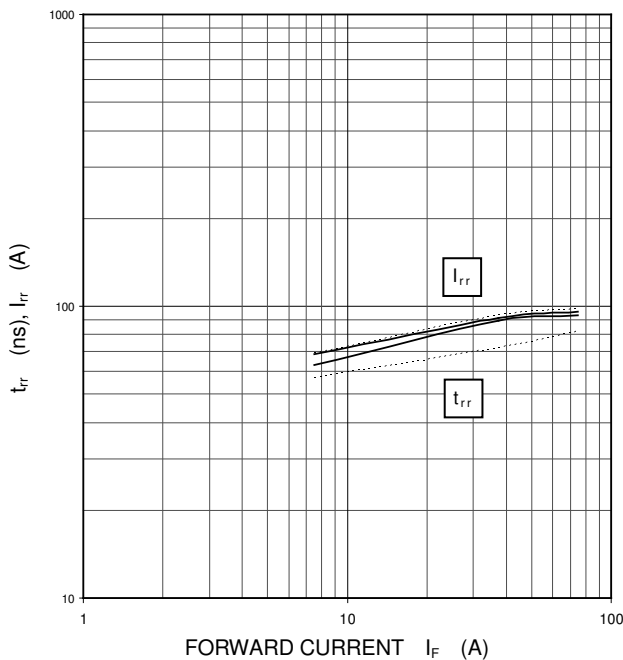


HALF-BRIDGE
SWITCHING CHARACTERISTICS
(TYPICAL)
 $V_{CC}=600\text{ V}$, $I_C/I_F=75\text{ A}$, $V_{GE}=\pm 15\text{ V}$,
INDUCTIVE LOAD, PER PULSE
——: $T_j=150\text{ }^\circ\text{C}$, - - - -: $T_j=125\text{ }^\circ\text{C}$



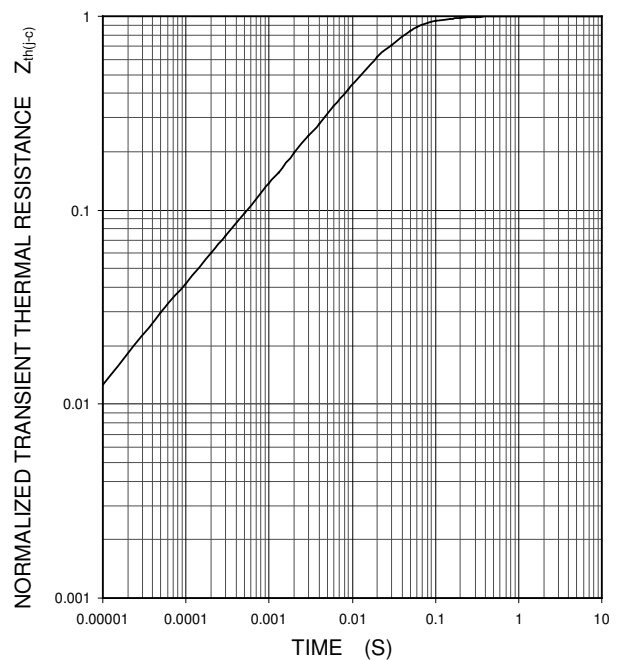
BRAKE DIODE
REVERSE RECOVERY CHARACTERISTICS
(TYPICAL)

$V_{CC}=600\text{ V}$, $V_{GE}=\pm 15\text{ V}$, $R_G=8.2\ \Omega$, INDUCTIVE LOAD
——: $T_j=150\text{ }^\circ\text{C}$, - - - -: $T_j=125\text{ }^\circ\text{C}$



TRANSIENT THERMAL IMPEDANCE CHARACTERISTICS
(MAXIMUM)

Single pulse, $T_C=25\text{ }^\circ\text{C}$
 $R_{th(j-c)Q}=0.31\text{ K/W}$, $R_{th(j-c)D}=0.47\text{ K/W}$



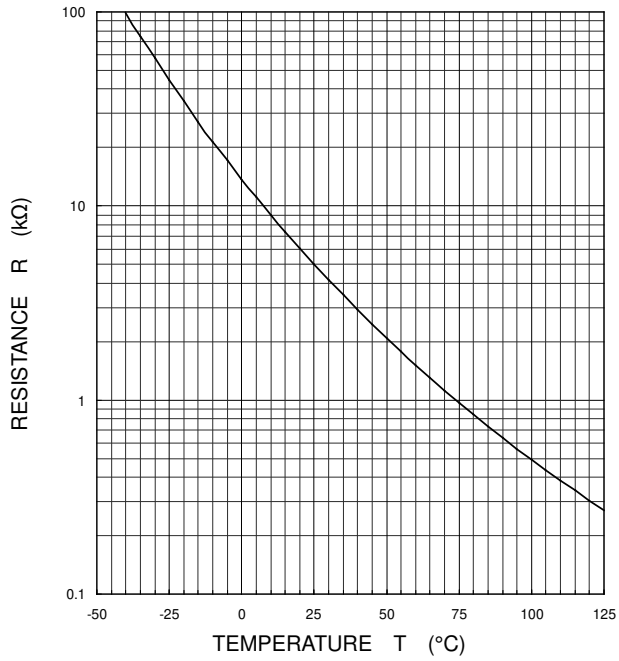
CM150RX-24S1

HIGH POWER SWITCHING USE
INSULATED TYPE

PERFORMANCE CURVES

NTC thermistor part

TEMPERATURE
CHARACTERISTICS
(TYPICAL)



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