

# QM10HB-2H

DRIVE USE FOR HIGH POWER TRANSISTOR  
INSULATED TYPE

## QM10HB-2H



- **I<sub>C</sub>** Collector current ..... **10A**
- **V<sub>CEX</sub>** Collector-emitter voltage ..... **1000V**
- **h<sub>FE</sub>** DC current gain ..... **5**
- **Insulated Type**
- **UL Recognized**

Yellow Card No. E80276 (N)

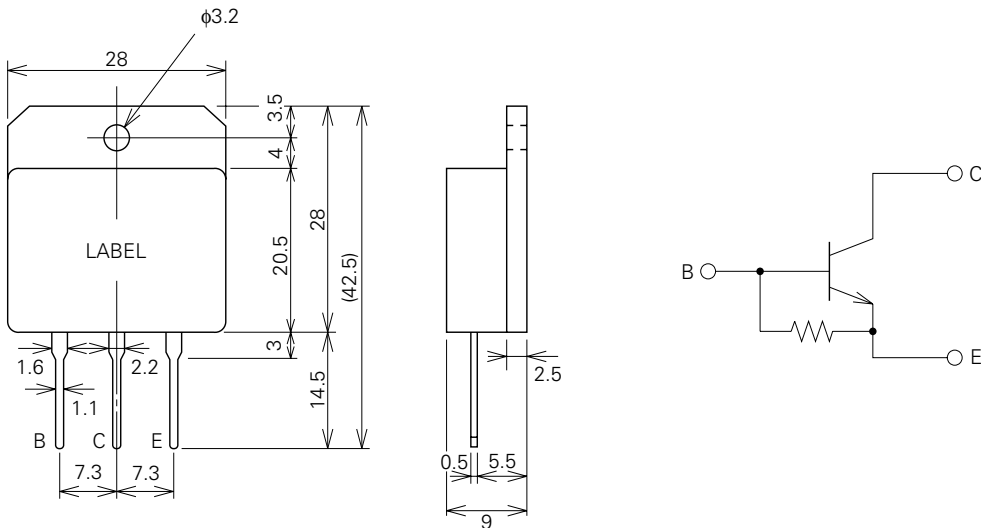
File No. E80271

## APPLICATION

Base driver for High voltage transistor modules

## OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



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## ABSOLUTE MAXIMUM RATINGS (Tj=25°C, unless otherwise noted)

| Symbol     | Parameter                 | Conditions                            | Ratings   | Unit  |
|------------|---------------------------|---------------------------------------|-----------|-------|
| VCEX (SUS) | Collector-emitter voltage | IC=1A, VEB=2V                         | 1000      | V     |
| VCEX       | Collector-emitter voltage | VEB=2V                                | 1000      | V     |
| VCBO       | Collector-base voltage    | Emitter open                          | 1000      | V     |
| VEBO       | Emitter-base voltage      | Collector open                        | 7         | V     |
| IC         | Collector current         | DC                                    | 10        | A     |
| PC         | Collector dissipation     | Tc=25°C                               | 100       | W     |
| IB         | Base current              | DC                                    | 2         | A     |
| Tj         | Junction temperature      |                                       | -40~+150  | °C    |
| Tstg       | Storage temperature       |                                       | -40~+125  | °C    |
| Viso       | Isolation voltage         | Charged part to case, AC for 1 minute | 2500      | V     |
| —          | Mounting torque           | Mounting screw M3                     | 0.59~0.98 | N·m   |
| —          | Weight                    | Typical value                         | 6~10      | kg·cm |
| —          | Weight                    | Typical value                         | 40        | g     |

## ELECTRICAL CHARACTERISTICS (Tj=25°C, unless otherwise noted)

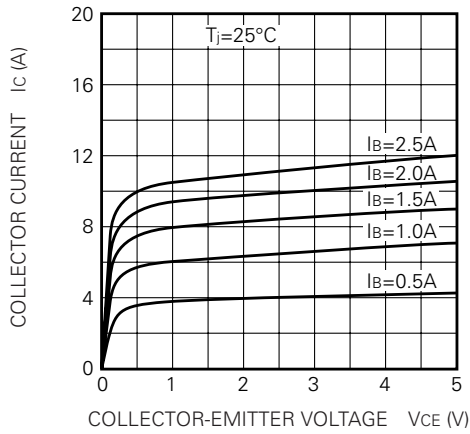
| Symbol      | Parameter                                | Test conditions              | Limits |      |      | Unit |
|-------------|------------------------------------------|------------------------------|--------|------|------|------|
|             |                                          |                              | Min.   | Typ. | Max. |      |
| ICEX        | Collector cutoff current                 | VCE=1000V, VEB=2V            | —      | —    | 1.0  | mA   |
| ICBO        | Collector cutoff current                 | VCB=1000V, Emitter open      | —      | —    | 1.0  | mA   |
| IEBO        | Emitter cutoff current                   | VEB=7V                       | —      | —    | 150  | mA   |
| VCE (sat)   | Collector-emitter saturation voltage     | IC=5A, IB=1A                 | —      | —    | 1.0  | V    |
| VBE (sat)   | Base-emitter saturation voltage          |                              | —      | —    | 1.5  | V    |
| hFE         | DC current gain                          | IC=5A, VCE=1V                | 5      | —    | —    | —    |
| ton         | Switching time                           | VCC=600V, IC=5A, IB1=-IB2=1A | —      | —    | 1.5  | μs   |
| ts          |                                          |                              | —      | —    | 7.0  | μs   |
| tf          |                                          |                              | —      | —    | 2.0  | μs   |
| Rth (j-c) Q | Thermal resistance (junction to case)    | Transistor part              | —      | —    | 1.2  | °C/W |
| Rth (c-f)   | Contact thermal resistance (case to fin) | Conductive grease applied    | —      | —    | 0.4  | °C/W |

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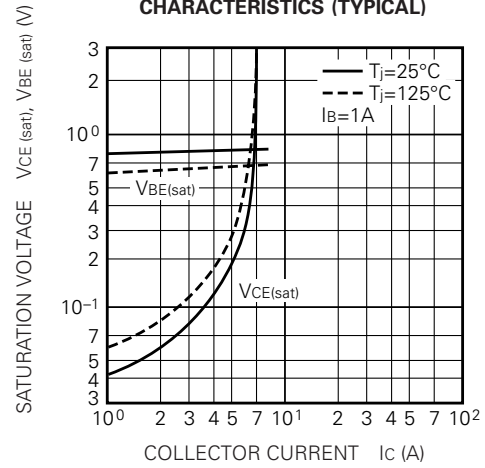
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## PERFORMANCE CURVES

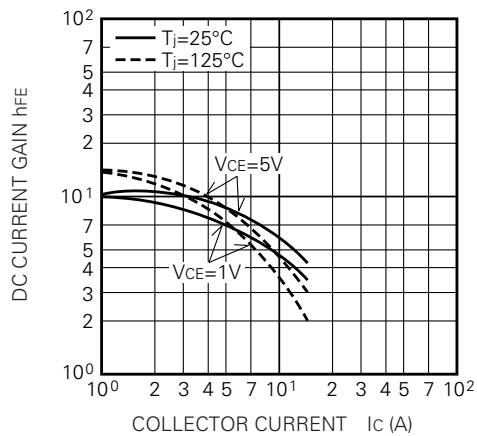
COMMON EMITTER OUTPUT  
CHARACTERISTICS (TYPICAL)



SATURATION VOLTAGE  
CHARACTERISTICS (TYPICAL)



DC CURRENT GAIN VS.  
COLLECTOR CURRENT (TYPICAL)



SWITCHING TIME VS. COLLECTOR  
CURRENT (TYPICAL)

