

# 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)

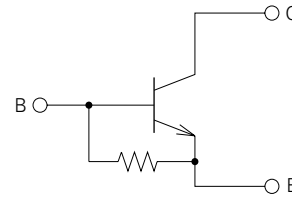
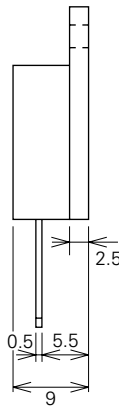
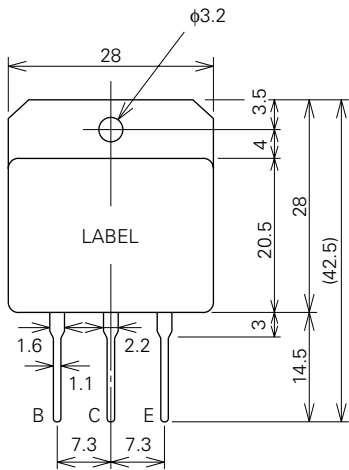
File No. E80271

## APPLICATION

Base driver for High voltage transistor modules

## OUTLINE DRAWING & CIRCUIT DIAGRAM

Dimensions in mm



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INSULATED TYPE**ABSOLUTE MAXIMUM RATINGS** (T<sub>j</sub>=25°C, unless otherwise noted)

Symbol	Parameter	Conditions	Ratings	Unit
V <sub>CEX (SUS)</sub>	Collector-emitter voltage	I <sub>C</sub> =1A, V <sub>EB</sub> =2V	1000	V
V <sub>CEX</sub>	Collector-emitter voltage	V <sub>EB</sub> =2V	1000	V
V <sub>CBO</sub>	Collector-base voltage	Emitter open	1000	V
V <sub>EBO</sub>	Emitter-base voltage	Collector open	7	V
I <sub>C</sub>	Collector current	DC	10	A
P <sub>C</sub>	Collector dissipation	T <sub>C</sub> =25°C	100	W
I <sub>B</sub>	Base current	DC	2	A
T <sub>J</sub>	Junction temperature		-40~+150	°C
T <sub>stg</sub>	Storage temperature		-40~+125	°C
V <sub>iso</sub>	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** (T<sub>j</sub>=25°C, unless otherwise noted)

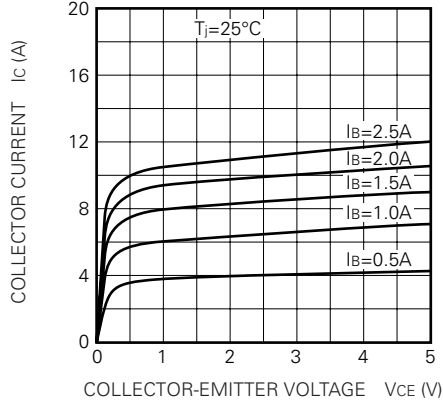
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
I <sub>CEX</sub>	Collector cutoff current	V <sub>CE</sub> =1000V, V <sub>EB</sub> =2V	—	—	1.0	mA
I <sub>CBO</sub>	Collector cutoff current	V <sub>CB</sub> =1000V, Emitter open	—	—	1.0	mA
I <sub>EBO</sub>	Emitter cutoff current	V <sub>EB</sub> =7V	—	—	150	mA
V <sub>CE (sat)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A, I <sub>B</sub> =1A	—	—	1.0	V
V <sub>BE (sat)</sub>	Base-emitter saturation voltage		—	—	1.5	V
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =5A, V <sub>CE</sub> =1V	5	—	—	—
t <sub>on</sub>	Switching time	V <sub>CC</sub> =600V, I <sub>C</sub> =5A, I <sub>B1</sub> =-I <sub>B2</sub> =1A	—	—	1.5	μs
t <sub>s</sub>			—	—	7.0	μs
t <sub>f</sub>			—	—	2.0	μs
R <sub>th (j-c) Q</sub>	Thermal resistance (junction to case)	Transistor part	—	—	1.2	°C/W
R <sub>th (c-f)</sub>	Contact thermal resistance (case to fin)	Conductive grease applied	—	—	0.4	°C/W

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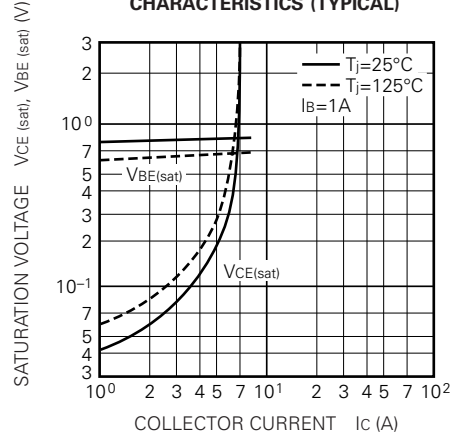
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PERFORMANCE CURVES

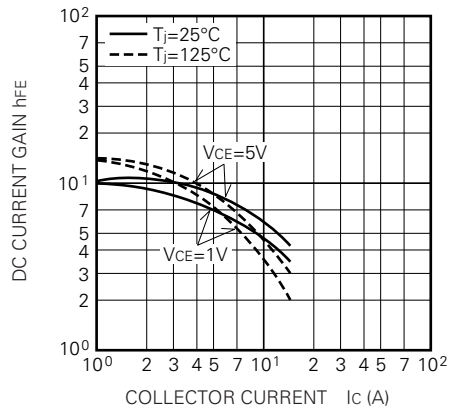
COMMON EMITTER OUTPUT CHARACTERISTICS (TYPICAL)



SATURATION VOLTAGE CHARACTERISTICS (TYPICAL)



DC CURRENT GAIN VS. COLLECTOR CURRENT (TYPICAL)



SWITCHING TIME VS. COLLECTOR CURRENT (TYPICAL)

