

[查询QM1000HA-2HB供应商](#)

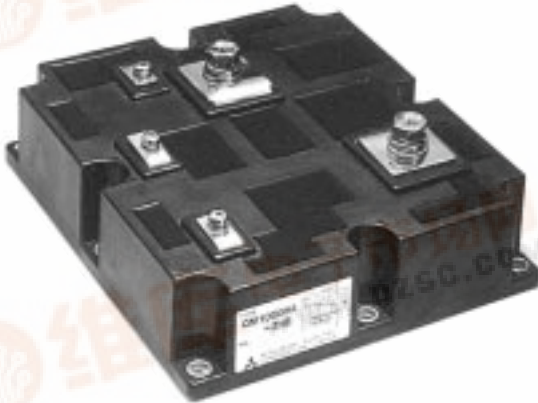
[捷多邦, 专业PCB打样工厂, 24小时加急出货](#)

MITSUBISHI TRANSISTOR MODULES

# QM1000HA-2HB

HIGH POWER SWITCHING USE  
INSULATED TYPE

QM1000HA-2HB



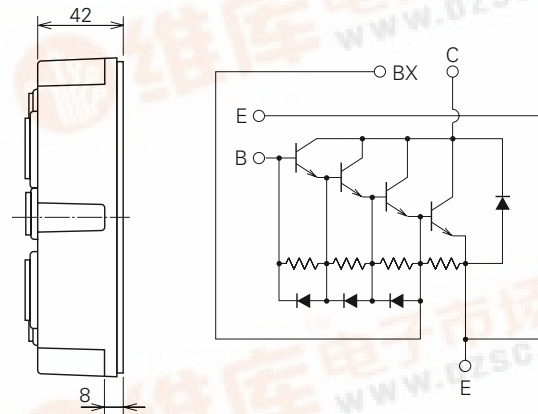
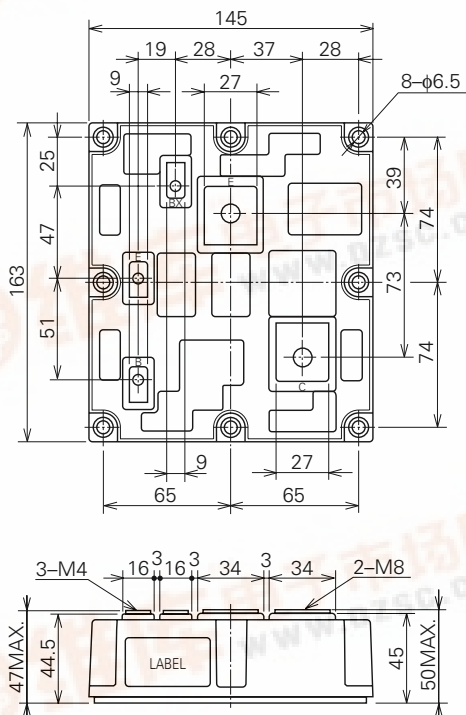
- **I<sub>c</sub>** Collector current ..... **1000A**
- **V<sub>CEX</sub>** Collector-emitter voltage ..... **1000V**
- **h<sub>FE</sub>** DC current gain ..... **750**
- **Insulated Type**
- **UL Recognized**  
Yellow Card No. E80276 (N)  
File No. E80271

## APPLICATION

AC motor controllers, UPS, CVCF, DC motor controllers, NC equipment, Welders

## 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	1000	A
-Ic	Collector reverse current	DC (forward diode current)	1000	A
PC	Collector dissipation	Tc=25°C	7000	W
Ib	Base current	DC	50	A
-IcSM	Surge collector reverse current (forward diode current)	Peak value of one cycle of 60Hz (half wave)	10000	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	Main terminal screw M8	8.85~10.8	N·m
			90~110	kg·cm
		Mounting screw M6	1.96~2.94	N·m
			20~30	kg·cm
		B(E) terminal screw M4	0.98~1.47	N·m
			10~15	kg·cm
BX terminal screw M4	0.98~1.47	N·m		
	10~15	kg·cm		
—	Weight	Typical value	2100	g

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

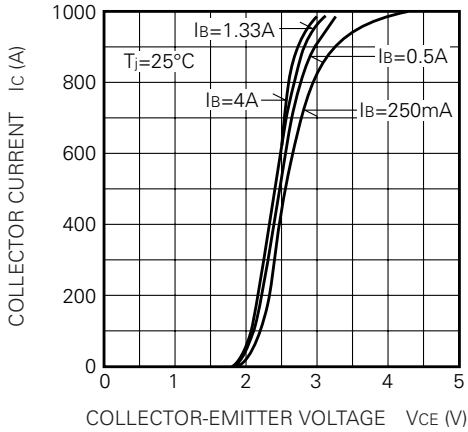
Symbol	Parameter	Test conditions	Limits			Unit
			Min.	Typ.	Max.	
ICEX	Collector cutoff current	VCE=1000V, VEB=2V	—	—	8.0	mA
ICBO	Collector cutoff current	VCB=1000V, Emitter open	—	—	8.0	mA
IEBO	Emitter cutoff current	VEB=7V, Collector open	—	—	400	mA
VCE (sat)	Collector-emitter saturation voltage	Ic=1000A, Ib=1.33A	—	—	4.0	V
VBE (sat)	Base-emitter saturation voltage		—	—	4.2	V
-VCEO	Collector-emitter reverse voltage	Ic=-1000A (diode forward voltage)	—	—	1.8	V
hFE	DC current gain	Ic=1000A, VCE=4.0V	750	—	—	—
ton	Switching time	VCC=600V, Ic=1000A, Ib1=2A, -Ib2=20A	—	—	2.5	μs
ts			—	—	20	μs
tf			—	—	7.0	μs
Rth (j-c) Q	Thermal resistance (junction to case)	Transistor part	—	—	0.018	°C/W
Rth (j-c) R		Diode part	—	—	0.07	°C/W
Rth (c-f)	Contact thermal resistance (case to fin)	Conductive grease applied	—	—	0.01	°C/W

# QM1000HA-2HB

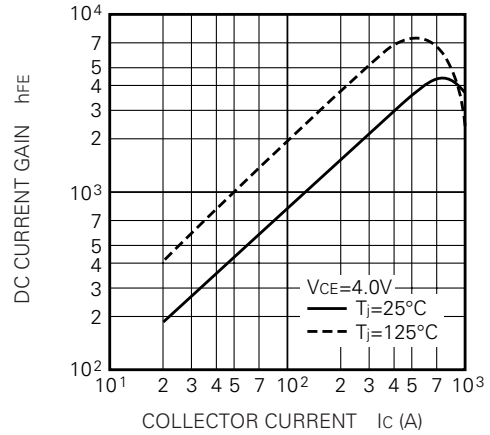
HIGH POWER SWITCHING USE  
INSULATED TYPE

## PERFORMANCE CURVES

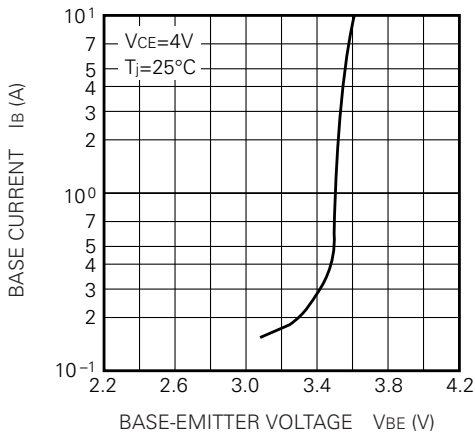
**COMMON EMITTER OUTPUT CHARACTERISTICS (TYPICAL)**



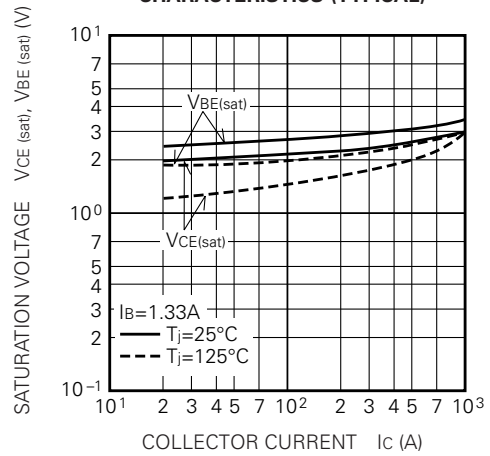
**DC CURRENT GAIN VS. COLLECTOR CURRENT (TYPICAL)**



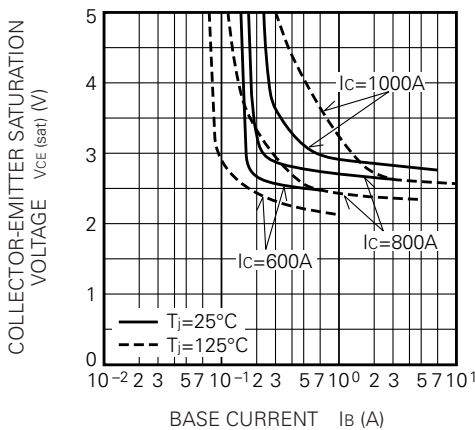
**COMMON EMITTER INPUT CHARACTERISTIC (TYPICAL)**



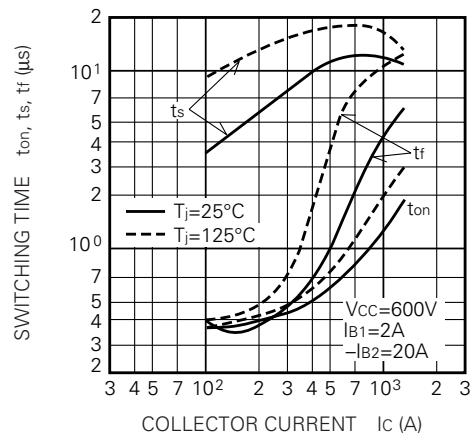
**SATURATION VOLTAGE CHARACTERISTICS (TYPICAL)**



**COLLECTOR-EMITTER SATURATION VOLTAGE (TYPICAL)**



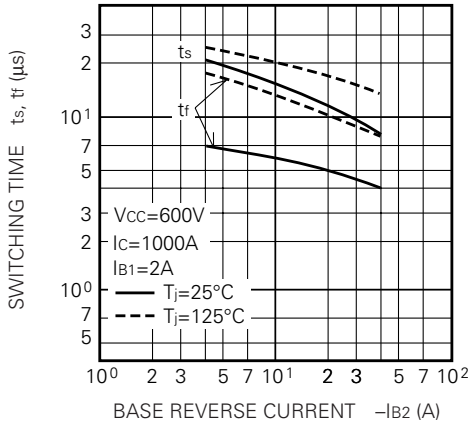
**SWITCHING TIME VS. COLLECTOR CURRENT (TYPICAL)**



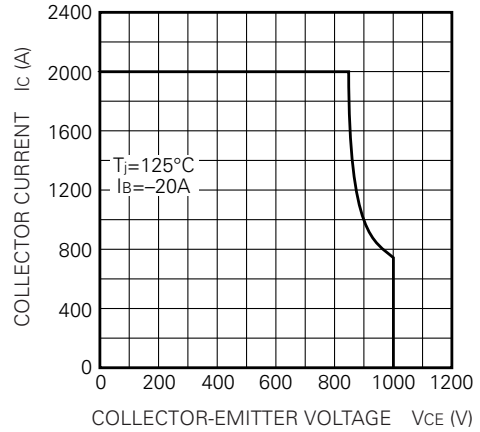
**QM1000HA-2HB**

**HIGH POWER SWITCHING USE  
INSULATED TYPE**

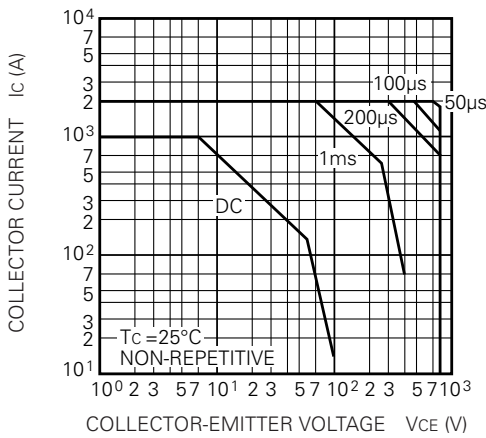
**SWITCHING TIME VS. BASE CURRENT (TYPICAL)**



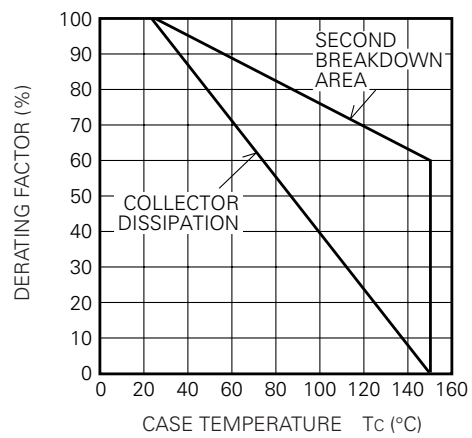
**REVERSE BIAS SAFE OPERATING AREA**



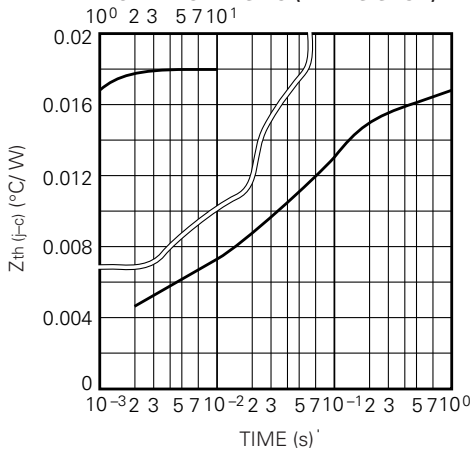
**FORWARD BIAS SAFE OPERATING AREA**



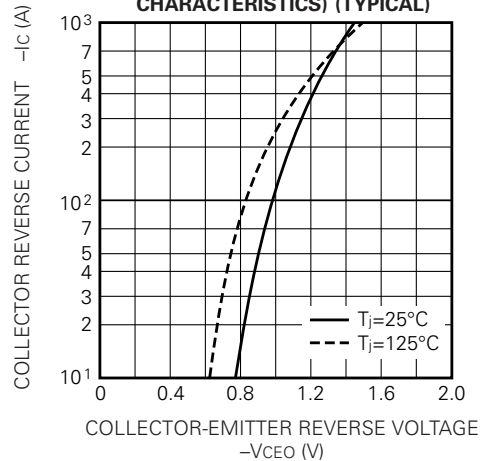
**DERATING FACTOR OF F. B. S. O. A.**



**TRANSIENT THERMAL IMPEDANCE CHARACTERISTIC (TRANSISTOR)**



**REVERSE COLLECTOR CURRENT VS. COLLECTOR-EMITTER REVERSE VOLTAGE (DIODE FORWARD CHARACTERISTICS) (TYPICAL)**



**QM1000HA-2HB**

**HIGH POWER SWITCHING USE  
INSULATED TYPE**

