

QM150HY-2H

HIGH POWER SWITCHING USE
INSULATED TYPE

QM150HY-2H



- **IC** Collector current **150A**
- **VCEX** Collector-emitter voltage **1000V**
- **hFE** DC current gain **75**
- **Insulated Type**
- **UL Recognized**

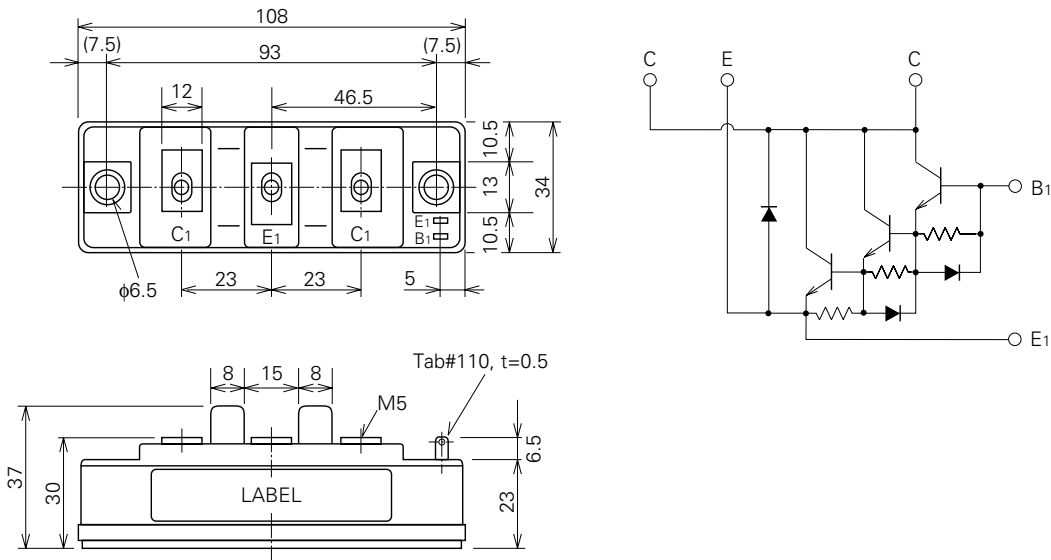
Yellow Card No. E80276 (N)
File No. E80271

APPLICATION

Inverters, Servo drives, 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	150	A
-IC	Collector reverse current	DC (forward diode current)	150	A
PC	Collector dissipation	Tc=25°C	1000	W
IB	Base current	DC	8	A
-ICSM	Surge collector reverse current (forward diode current)	Peak value of one cycle of 60Hz (half wave)	1500	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 M5	1.47~1.96	N·m
			15~20	kg·cm
		Mounting screw M6	1.96~2.94	N·m
			20~30	kg·cm
—	Weight	Typical value	250	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	—	—	2.0	mA
ICBO	Collector cutoff current	VCB=1000V, Emitter open	—	—	2.0	mA
IEBO	Emitter cutoff current	VEB=7V	—	—	200	mA
VCE (sat)	Collector-emitter saturation voltage	IC=150A, IB=3A	—	—	2.5	V
VBE (sat)	Base-emitter saturation voltage		—	—	3.5	V
-VCEO	Collector-emitter reverse voltage	-IC=150A (diode forward voltage)	—	—	1.8	V
hFE	DC current gain	IC=150A, VCE=2.8V/5V	75/100	—	—	—
ton	Switching time	VCC=600V, IC=150A, IB1=-IB2=3A	—	—	3.0	μs
ts			—	—	15	μs
tf			—	—	3.0	μs
Rth (j-c) Q	Thermal resistance (junction to case)	Transistor part	—	—	0.125	°C/W
Rth (j-c) R		Diode part	—	—	0.6	°C/W
Rth (c-f)	Contact thermal resistance (case to fin)	Conductive grease applied	—	—	0.065	°C/W