

SQD200A40/60

TOP



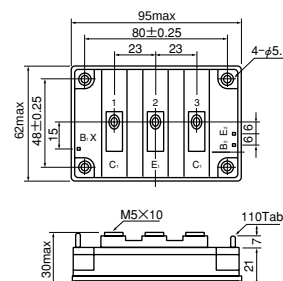
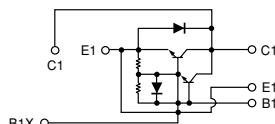
UL:E76102(M)

SQD200A is a Darlington power transistor module which a high speed, high power Darlington transistor. The transistor has a reverse paralalled fast recovery diode. The mounting base of the module is electrically isolated from semiconductor elements for simple heatsink construction.

- $I_C=200A$, $V_{CEX}=400/600V$
- Low saturation voltage for higher efficiency.
- High DC current gain h_{FE}
- Isolated mounting base
- V_{EBO} 10V for faster switching speed.

(Applications)

Motor Control (VVVF), AC/DC Servo, UPS,
Switching Power Supply, Ultrasonic Application



Unit : mm

■ Maximum Ratings

(Tj=25°C unless otherwise specified)

Symbol	Item		Conditions	Ratings		Unit
				SQD200A40	SQD200A60	
V _{CBO}	Collector-Base Voltage			400	600	V
V _{CEX}	Collector-Emitter Voltage		V _{BE} =−2V	400	600	V
V _{EBO}	Emitter-Base Voltage			10		V
I _C	Collector Current		() =pw≤1ms	200 (400)		A
−I _C	Reverse Collector Current			200		A
I _B	Base Current			12		A
P _T	Total power dissipation		T _C =25℃	1250		W
T _J	Junction Temperature			−40 to +150		℃
T _{stg}	Storage Temperature			−40 to +125		℃
V _{iso}	Isolation Voltage		A.C.1minute	2500		V
	Mounting	(M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)		N・m (kgf・cm)
	Torque	Terminal (M5)	Recommended Value 1.5-2.5 (15-25)	2.7 (28)		
	Mass		Typical Value	380		g

■ Electrical Characteristics

Symbol	Item		Conditions	Ratings		Unit	
				Min.	Max.		
I _{CBO}	Collector Cut-off Current		V _{CB} =V _{CB0}		2.0	mA	
I _{EBO}	Emitter Cut-off Current		V _{EB} =V _{EBO}		800	mA	
V _{CE0(SUS)}	Collector Emitter Sustaning Voltage	SQD200A40	I _C =1A	300		V	
		SQD200A60		450			
V _{CEX(SUS)}			SQD200A40	I _C =40A, I _{B2} =-8A	400		V
			SQD200A60		600		
h _{FE}	DC Current Gain		I _C =200A, V _{CE} =2V	75			
			I _C =200A, V _{CE} =5V	100			
V _{CE(sat)}	Collector-Emitter Saturation Voltage		I _C =200A, I _B =2.7A		2.0	V	
V _{BE(sat)}	Base-Emitter Saturation Voltage		I _C =200A, I _B =2.7A		2.5	V	
t _{on}	Switching Time	On Time	V _{CC} =300V, I _C =200A I _{B1} =4A, I _{B2} =-4A		2.0	μs	
t _s		Storage Time			12.0		
t _f		Fall Time			3.0		
V _{ECO}	Collector-Emitter Reverse Voltage		-I _C =200A		1.4	V	
R _{th(j-c)}	Thermal Impedance (junction to case)		Transistor part		0.1	℃/W	
			Diode part		0.3		

