

TRANSISTOR MODULE (NON-ISOLATED TYPE)

SQD50AB100

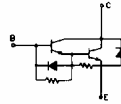
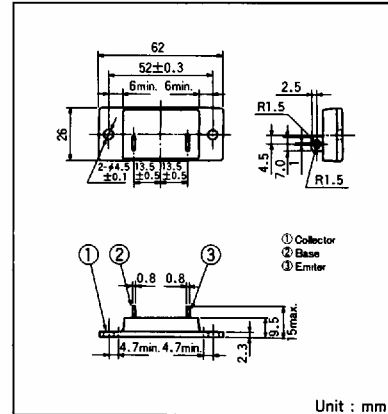
SQD50AB is a high speed, high power Darlington transistor designed for use in Resonance circuit. The transistor has a reverse paralleled fast recovery diode.

- $V_{CB0} = 1000V$, $I_c = 50A$
- Suitable for Resonance circuit applications.
- Non-isolated.

(Applications)

Induction Cooker, Inverter, Microwave Oven etc.

DISCONTINUED



Maximum Ratings

Unit : mm
Tj = 25°C

Symbol	Item	Conditions	Ratings	Unit
V_{CB0}	Collector-Base Voltage		1000	V
V_{CE0}	Collector-Emitter Voltage	$I_c = 25mA$	450	V
V_{EB0}	Emitter-Base Voltage		11	V
I_c	Collector Current	() Peak	50 (100)	A
$-I_c$	Reverse Collector Current		6	
I_b	Base Current		5	A
P_T	Total power dissipation		350	W
T_j	Junction Temperature		-30 ~ +150	°C
T_{stg}	Storage Temperature		-30 ~ +125	°C
	Mounting Torque (M4)	Recommended Value 1.0 ~ 1.4 (10 ~ 14)	1.5 (15)	N·m (kgf·cm)

Electrical Characteristics

Tj = 25°C

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{cbo}	Collector Cut-off Current	$V_{CB} = 1000V$			1.0	mA
I_{ebo}	Emitter Cut-off Current	$V_{EB} = 11V$ Tj = 25°C		600	830	mA
		$V_{EB} = 11V$ Tj = -10°C		700		
$V_{CE0(SUS)}$	Collector-Emitter Sustaining Voltage	$I_c = 25mA$	450			V
$V_{CEX(SUS)}$		$I_c = 1A$ $I_{B2} = -10A$	800			
h_{FE}	DC Current Gain	$I_c = 10A$ $V_{CE} = 5V$		300		
		$I_c = 50A$ $V_{CE} = 5V$	70	120	250	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_c = 50A$ $I_B = 1A$			2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_c = 50A$ $I_B = 1A$			2.8	V
t_{on}	Switching Time	$V_{CC} = 100V$ $I_c = 50A$ $I_{B1} = 1A$ $I_{B2} = -5A$			3.5	μs
t_s					3.0	
t_f					1.75	
V_{ECO}	Collector-Emitter Reverse Voltage	$I_c = -10A$			1.5	V
t_{rr}	Reverse Recovery time	$I_c = -2A$ $di/dt = -20A/\mu s$		3		μs
$R_{th(j-c)}$	Thermal Impedance (junction to case)				0.36	°C/W

