

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07881 0 T-33-35

2SD1166

SILICON NPN TRIPLE DIFFUSED MESA TYPE
 (DARLINGTON POWER)

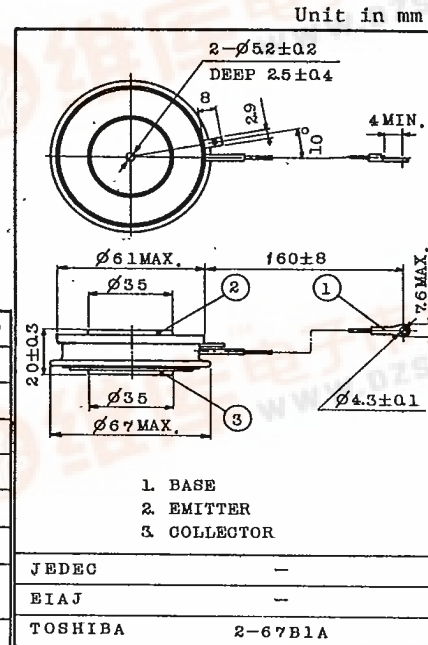
HIGH POWER SWITCHING APPLICATION
 AC & DC MOTOR CONTROL APPLICATION
 INVERTER APPLICATION

FEATURES:

- High Voltage : $V_{CEO(SUS)} > 900V$
- Triple Diffused Design
- Darlington Design

MAXIMUM RATINGS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CB0}	1000	V
Collector-Emitter Voltage	$V_{CE0(SUS)}$	900	V
Emitter-Base Voltage	V_{EB0}	6	V
Collector Current	I_C	200	A
Emitter Current	I_E	-200	A
Base Current	I_B	12	A
Thermal Resistance (Double Side Cooling)	$R_{th(j-c)}$	0.04	$^\circ C/W$
Junction Temperature	T_j	125	$^\circ C$
Storage Temperature	T_{stg}	-40 ~ 150	$^\circ C$
Mounting Force Required	F	1000±100	kg



Weight : 250g

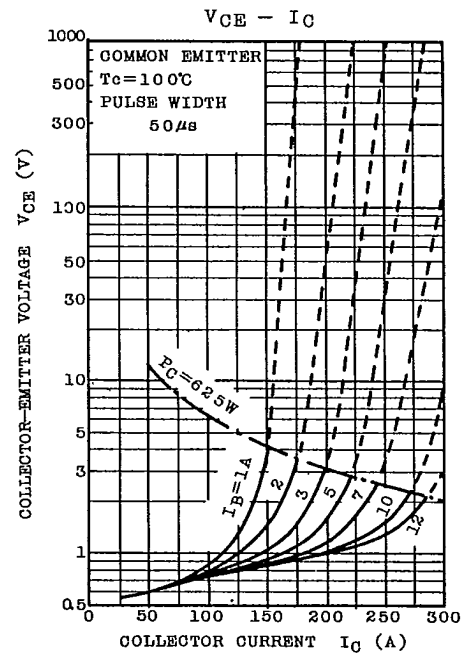
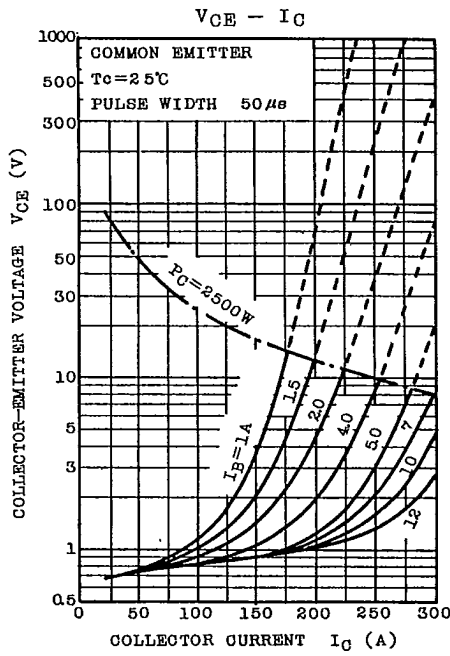
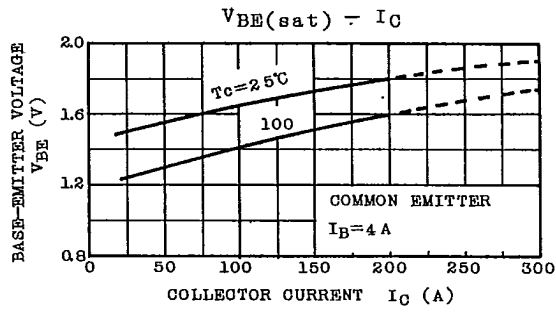
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Current Transfer Ratio	h_{FE}	$V_{CE}=5V, I_C=200A$	80	200	-	
Collector-Emitter Sustaining Voltage	$V_{CE0(SUS)}$	$I_C=0.5A, L=40mH$	900	-	-	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=200A, I_B=5A$ (Note)	-	-	2.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-	-	2.5	V
Collector Cut-off Current	I_{CE0}	$V_{CE}=900V, I_B=0$	-	1.0	3.0	mA
Emitter Cut-off Current	I_{EB0}	$V_{EB}=6V, I_C=0$	-	300	2000	mA
Switching Time	Turn-on Time	$I_C=200A, I_{B1}=4A, I_{B2}=8A, V_C=600V$	-	1.8	3.0	μs
	Storage Time		-	24	30	μs
	Fall Time		-	4.0	8.0	μs

Note: Pulse Test; Pulse Width $\leq 300\mu s$ Duty Cycle $\leq 3\%$
 Mounting Force; F=1000kg

TOSHIBA CORPORATION





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