

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07881

D

T-33-35

2SD1166SILICON NPN TRIPLE DIFFUSED MESA TYPE
(DARLINGTON POWER)

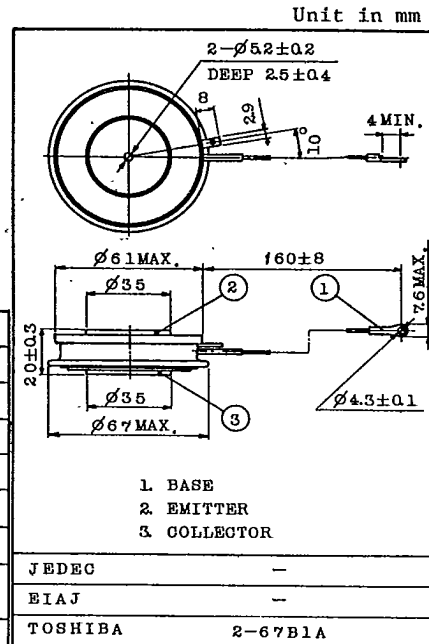
HIGH POWER SWITCHING APPLICATION
AC & DC MOTOR CONTROL APPLICATION
INVERTER APPLICATION

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_{CBO}	1000	V
Collector-Emitter Voltage	$V_{CEO(SUS)}$	900	V
Emitter-Base Voltage	V_{EBO}	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



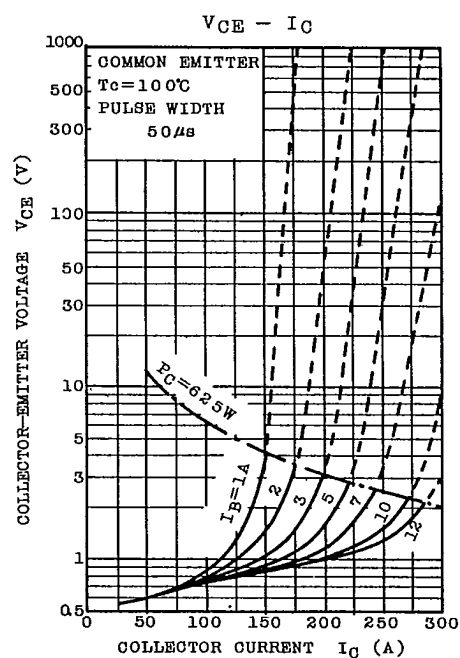
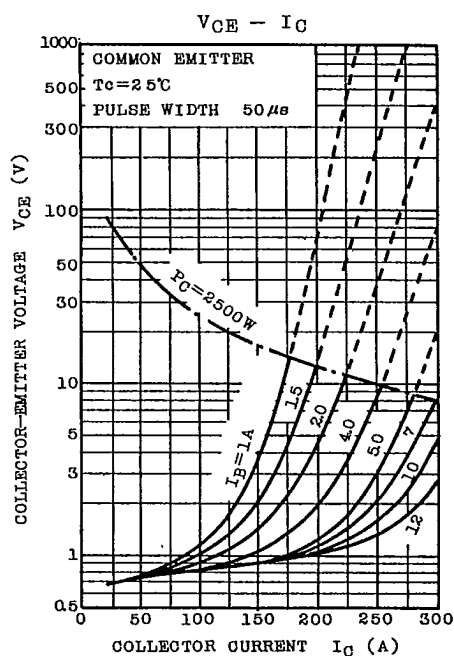
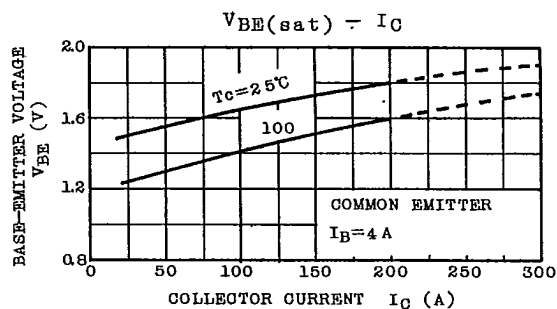
Weight : 250g

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	$V_{CEO(SUS)}$	$I_C = 0.5A, L = 40mH$	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_{CEO}	$V_{CE} = 900V, I_B = 0$	—	1.0	3.0	mA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 6V, I_C = 0$	—	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

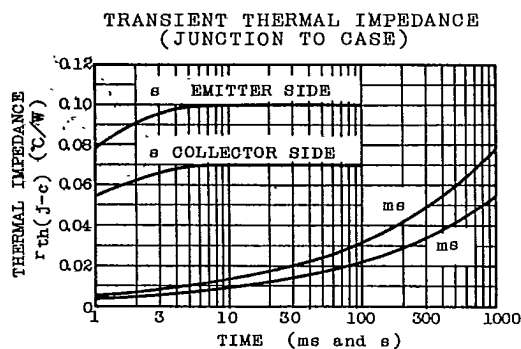
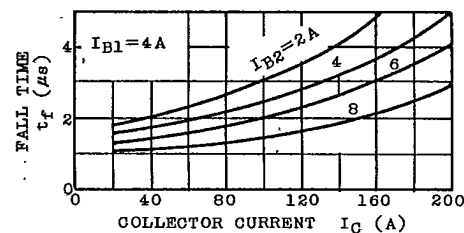
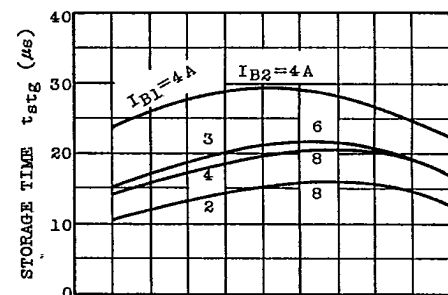
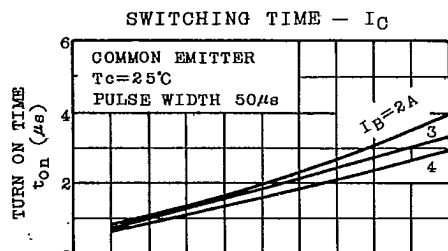
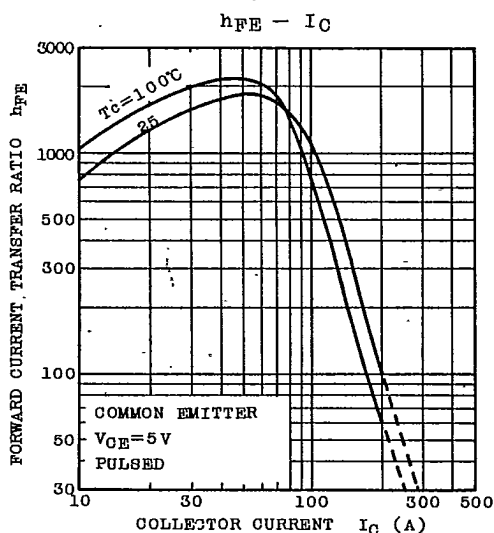
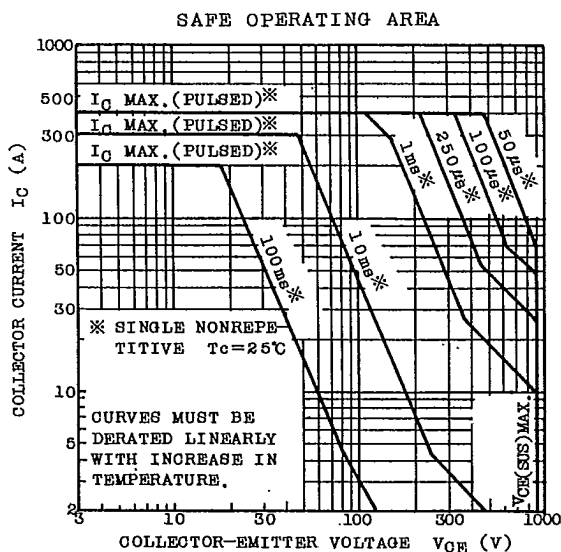


TOSHIBA CORPORATION

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07883 D T-33-35

2SD1166



TOSHIBA CORPORATION