

9097250 TOSHIBA (DISCRETE/OPTO)

56C 07878 D T-33-35

SILICON NPN TRIPLE DIFFUSED MESA TYPE
(DARLINGTON POWER)**2SD1165A**

HIGH POWER SWITCHING APPLICATION.
DC-AC POWER INVERTER APPLICATION.
MOTOR CONTROL APPLICATION.

FEATURES:

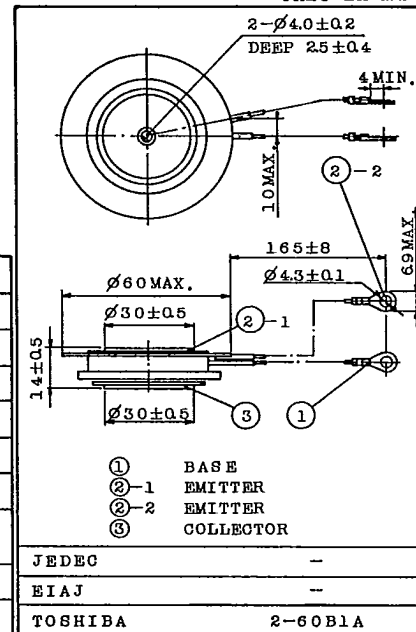
- High Voltage : $V_{CEO(SUS)} > 900V$
- Triple Diffused Design
- Darlington Design

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	100	A
Emitter Current	I_E	-100	A
Base Current	I_B	12	A
Thermal Resistance (Double Side Cooling)	$R_{th(j-c)}$	0,08	$^\circ C/W$
Junction Temperature	T_j	125	$^\circ C$
Storage Temperature	T_{stg}	-40 ~ 150	$^\circ C$
Mounting Force Required	F	500±50	kg

INDUSTRIAL APPLICATIONS

Unit in mm



Weight : 150g

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Current Transfer Ratio	h_{FE}	$V_{CE} = 5V, I_C = 100A$	60	-	-	
		$V_{CE} = 5V, I_C = 50A$	-	500	-	
Collector-Emitter Sustaining Voltage	$V_{CEO(SUS)}$	$I_C = 0.5A, L = 40mH$	900	-	-	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 100A, I_B = 3A$ (Note)	-	-	2.0	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-	-	2.5	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 1000V, I_E = 0$	-	-	2	mA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 6V, I_C = 0$	-	-	1000	mA
Switching Time	Turn-on Time	$I_C = 100A, I_{B1} = 3A,$ $-I_{B2} = 6A, V_C = 600V,$ $R_L = 6\Omega$	-	1.0	2.0	μs
	Storage Time		-	20	25	μs
	Fall Time		-	3.0	5.0	μs

Note : Pulse Test: Pulse Width $\leq 300\mu s$ Duty Cycle $\leq 3\%$
Mounting Force; F=500kg

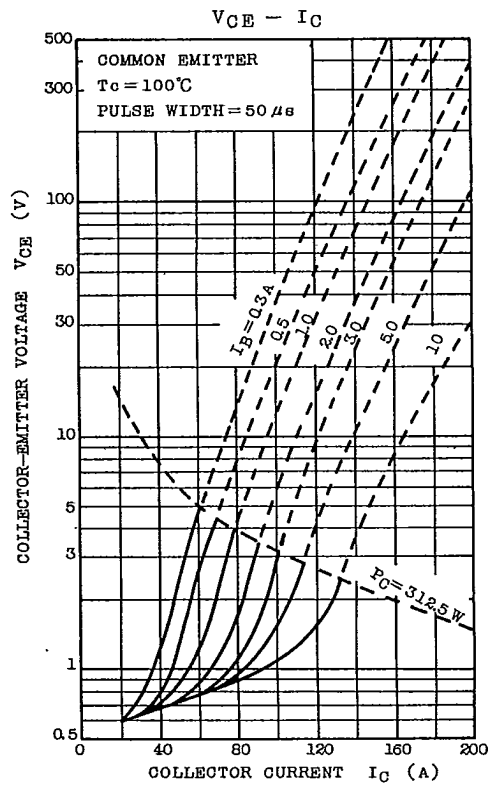
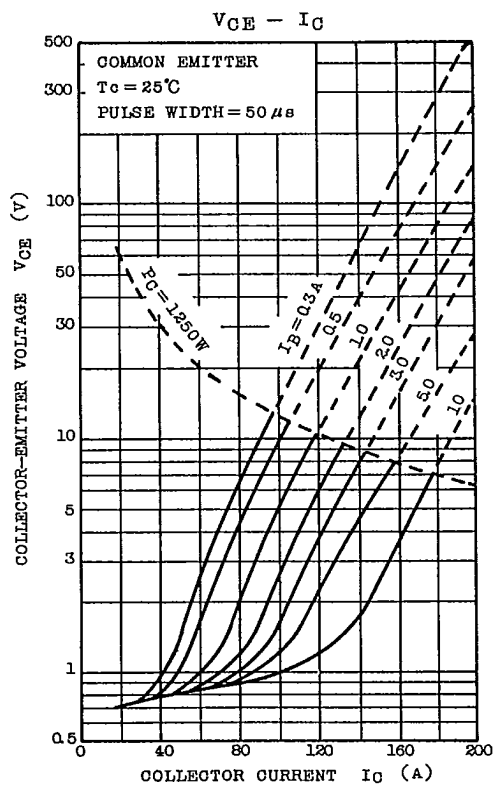
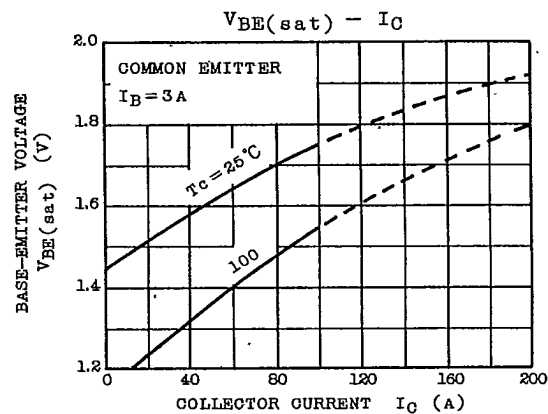
TOSHIBA CORPORATION

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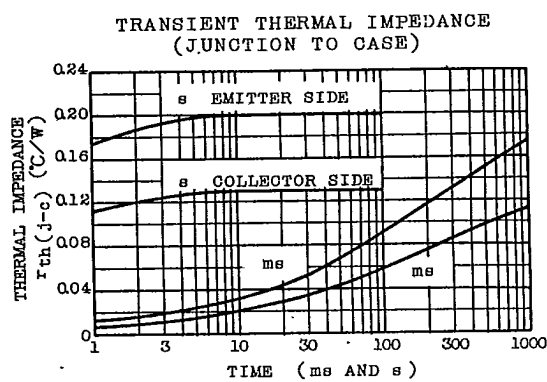
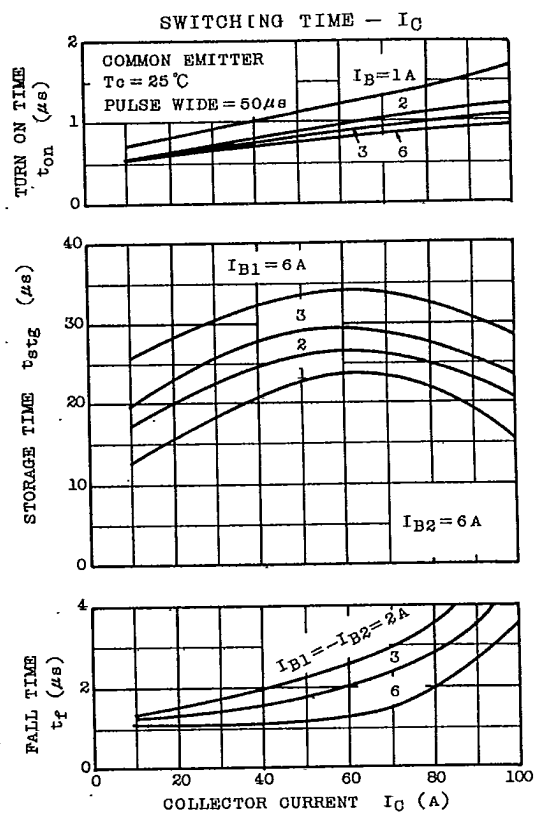
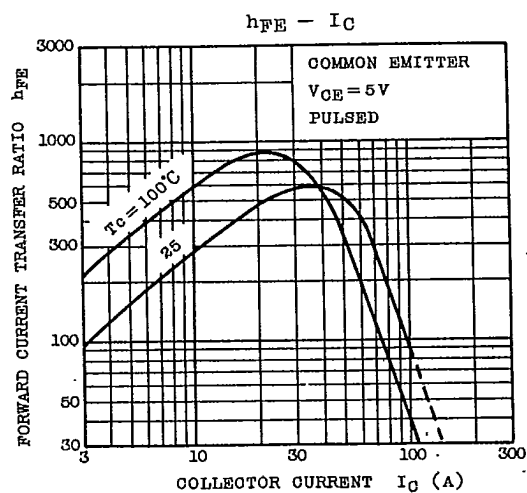
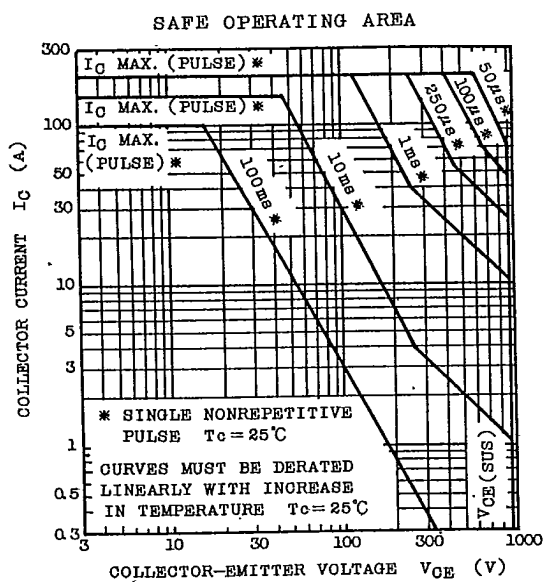
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