

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SD2500

HORIZONTAL DEFLECTION OUTPUT FOR COLOR TVs

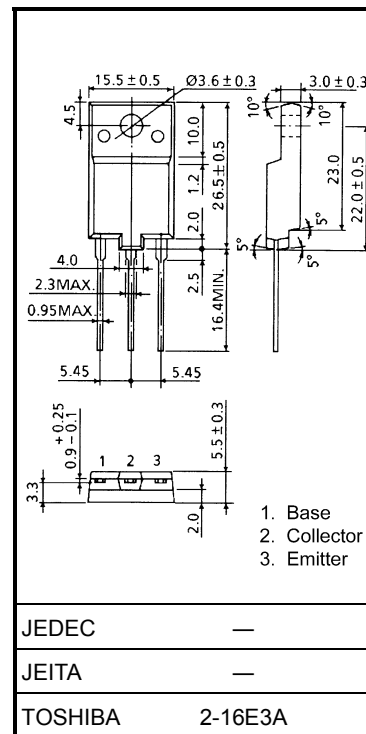
- High Voltage : $V_{CBO} = 1500\text{ V}$
- Low Saturation Voltage : $V_{CE(sat)} = 3\text{ V (Max.)}$
- High Speed : $t_f = 0.35\mu\text{s (Typ.)}$
- Collector Metal (Fin) is Fully Covered with Mold Resin.

ABSOLUTE MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	1500	V
Collector-Emitter Voltage	V_{CEO}	600	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current	DC	I_C	10
	Pulse	I_{CP}	20
Base-Current	I_B	5	A
Collector Power Dissipation	P_C	50	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings. Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Unit: mm

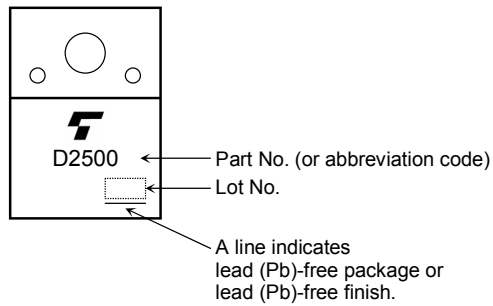


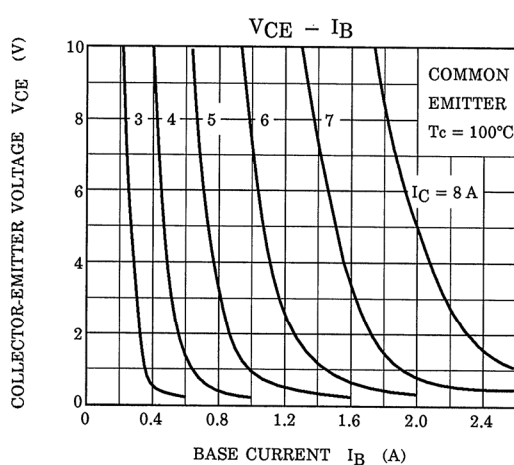
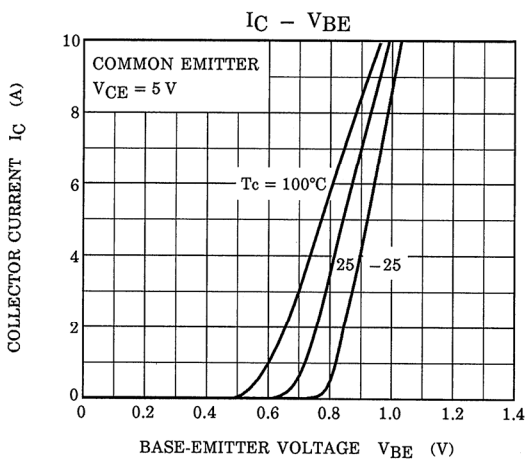
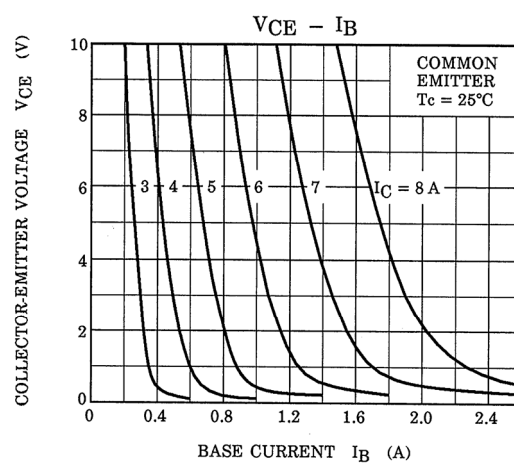
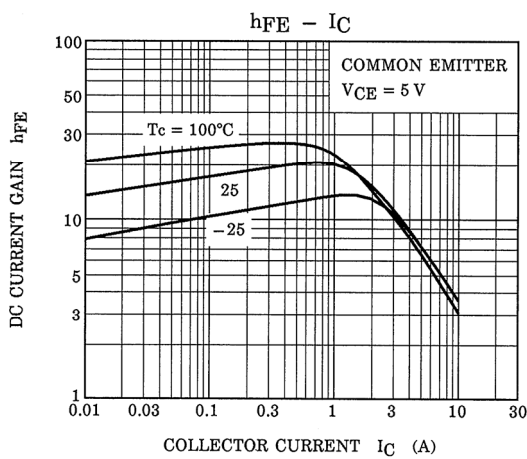
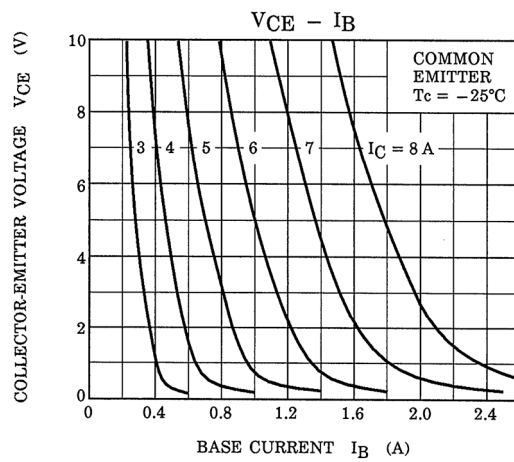
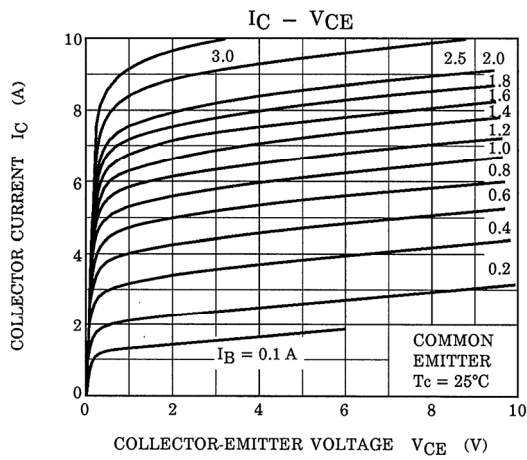
Weight: 5.5 g (typ.)

ELECTRICAL CHARACTERISTICS (Tc = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current	I _{CB0}	V _{CB} = 1500 V, I _E = 0	—	—	1	mA
Emitter Cut-off Current	I _{EB0}	V _{EB} = 5 V, I _C = 0	—	—	10	μA
Collector-Emitter Breakdown Voltage	V _{(BR) CEO}	I _C = 10 mA, I _B = 0	600	—	—	V
DC Current Gain	h _{FE} (1)	V _{CE} = 5 V, I _C = 1 A	10	—	30	—
	h _{FE} (2)	V _{CE} = 5 V, I _C = 6	4	—	8	
Collector-Emitter Saturation Voltage	V _{CE (sat)}	I _C = 6A I _B = 1.5A	—	—	3	V
Base-Emitter Saturation Voltage	V _{BE (sat)}	I _C = 6A I _B = 1.5A	—	1.0	1.4	V
Transition Frequency	f _T	V _{CE} = 10 V, I _C = 0.1 A	—	1.7	—	MHz
Collector Output Capacitance	C _{ob}	V _{CB} = 10 V, I _E = 0, f = 1 MHz	—	135	—	pF
Switching Time	Storage Time	I _{CP} = 6A, I _{B1} (end) = 1.5A f _H = 15.75kHz	—	7	11	μs
	Fall Time		—	0.35	0.7	

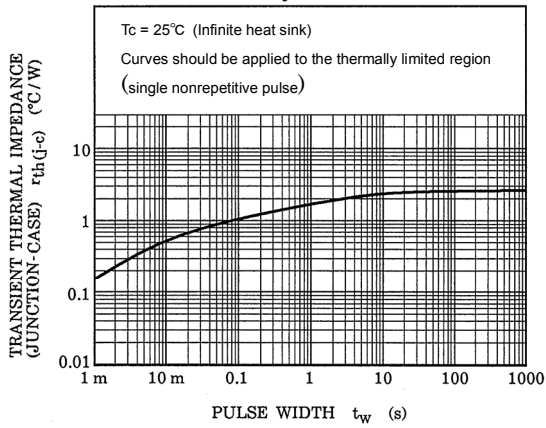
MARKING



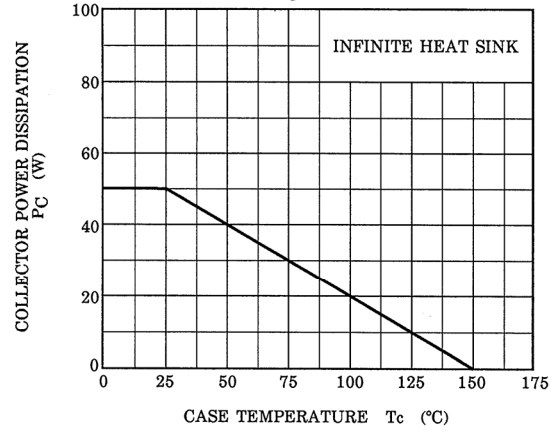


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TO THE THERMALLY LIMITED REGION.

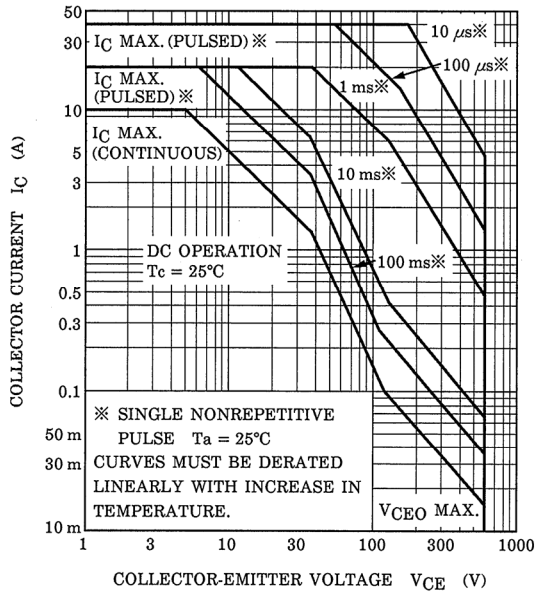
$$r_{th(j-c)} - t_w$$



$$P_C - T_c$$



SAFE OPERATING AREA



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