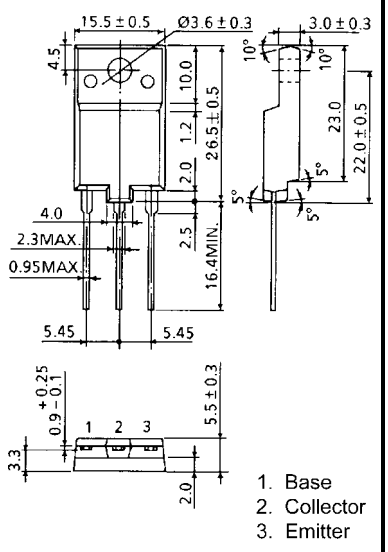
TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

2SD2550

HORIZONTAL DEFLECTION OUTPUT FOR COLOR TV

- High Voltage : V_{CBO} = 1700 V
- Low Saturation Voltage : $V_{CE\ (sat)}$ = 5.0 V (Max.)
- High Speed : t_f = 0.6 μs (Max.)
- Bult-in Damper Type
- Collector Metal (Fin) is Fully Covered with Mold Resin.

Unit: mm



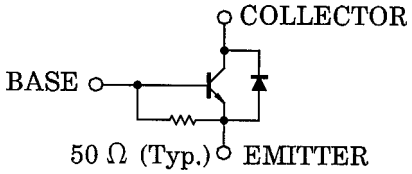
JEDEC	—
JEITA	—
TOSHIBA	2-16E3A

Weight: 5.5 g (typ.)

MAXIMUM RATINGS (Tc = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	1700	V
Collector-Emitter Voltage		V_{CEO}	600	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current	DC	I_C	4	A
	Pulse	I_{CP}	8	
Base Current		I_B	2	A
Collector Power Dissipation		P_C	50	W
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	−55~150	°C

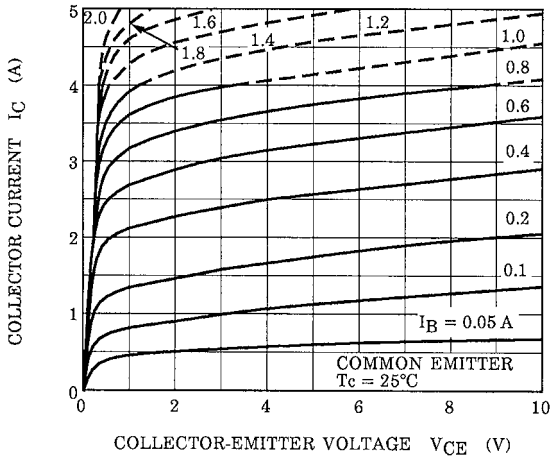
EQUIVALENT CIRCUIT



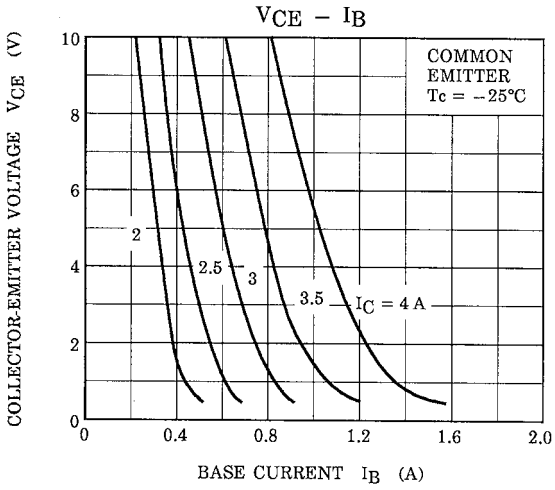
ELECTRICAL CHARACTERISTICS (Tc = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut−off Current		I_{CBO}	V_{CB} = 1700 V, I_E = 0	—	—	1	mA
Emitter Cut−off Current		I_{EBO}	V_{EB} = 5 V, I_C = 0	66	—	200	mA
Emitter−Base Breakdown Voltage		$V_{(BR)\ EBO}$	I_C = 400 mA, I_B = 0	5	—	—	V
DC Current Gain		h_{FE}	V_{CE} = 5 V, I_C = 1 A	8	—	22	—
Collector−Emitter Saturation Voltage		$V_{CE\ (sat)}$	I_C = 3 A, I_B = 0.8 A	—	5	8	V
Base−Emitter Saturation Voltage		$V_{BE\ (sat)}$	I_C = 3 A, I_B = 0.8 A	—	—	1.2	V
Forward Voltage (Damper Diode)		V_F	I_F = 4 A	—	1.5	2.0	V
Transition Frequency		f_T	V_{CE} = 10 V, I_C = 0.1 A	—	3	—	MHz
Collector Output Capacitance		C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz	—	85	—	pF
Switching Time	Storage Time	t_{stg}	I_{CP} = 3 A, I_{B1} (end) = 0.8 A f_H = 15.75 kHz	—	7.5	10	μs
	Fall Time	t_f		—	0.3	0.6	

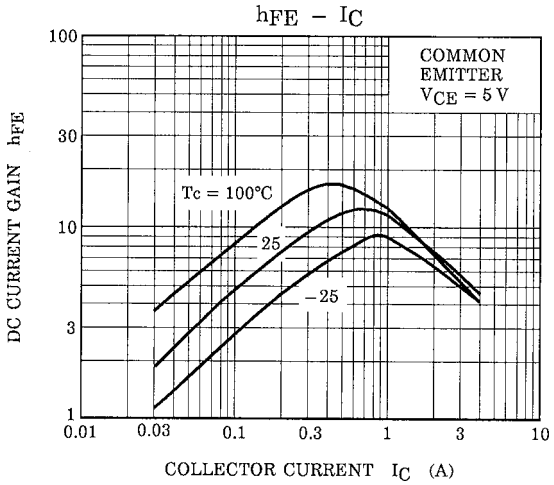
$I_C - V_{CE}$



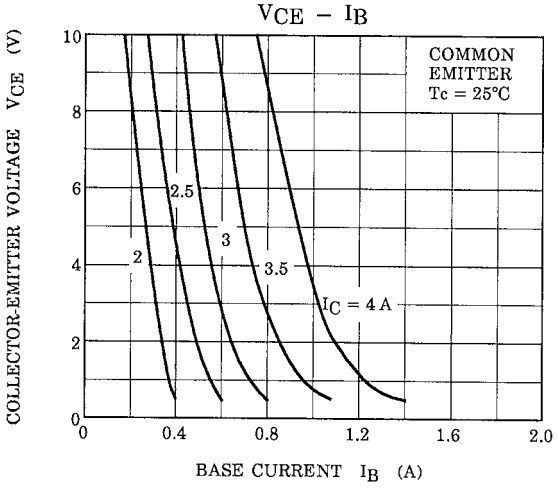
$V_{CE} - I_B$



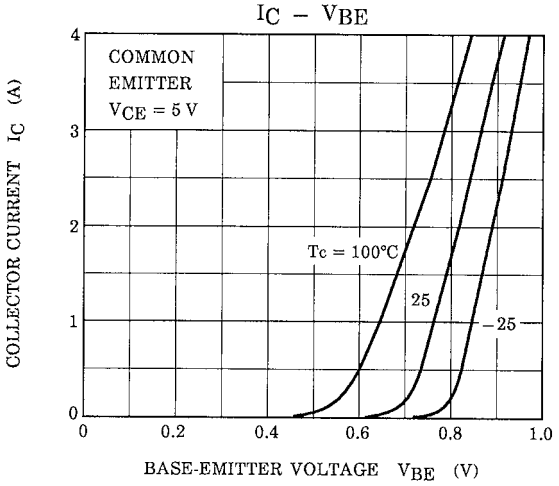
$h_{FE} - I_C$



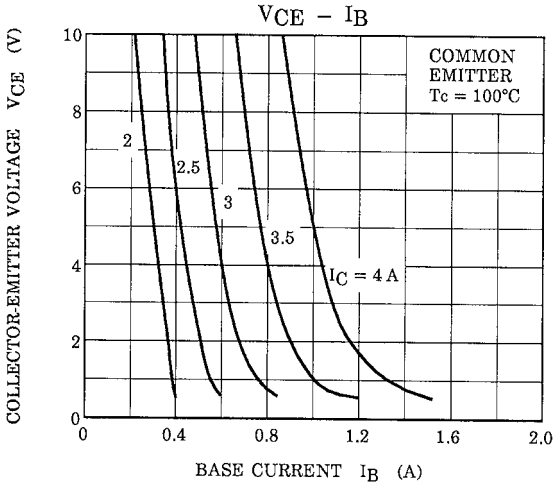
$V_{CE} - I_B$



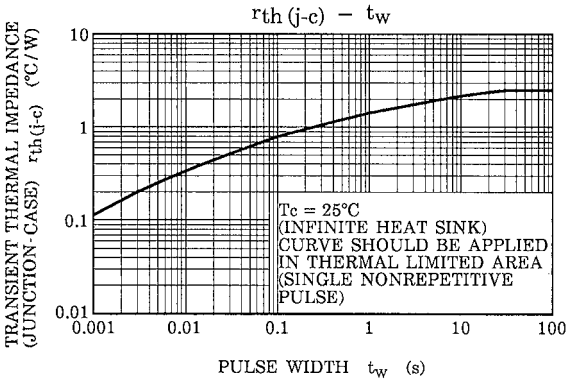
$I_C - V_{BE}$



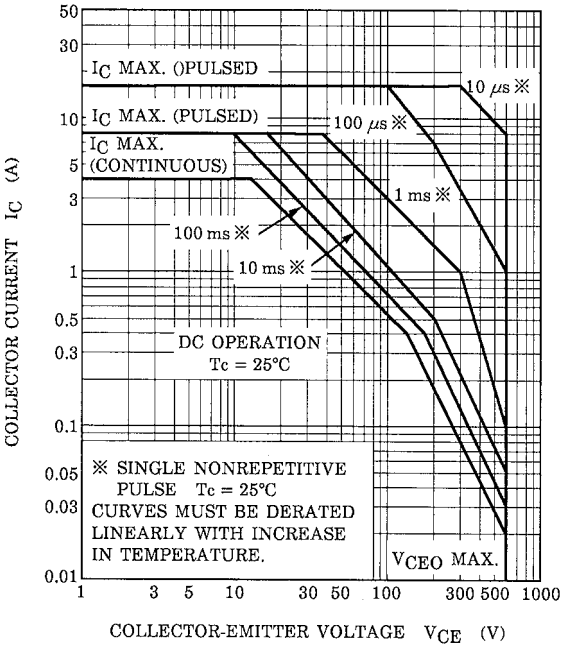
$V_{CE} - I_B$



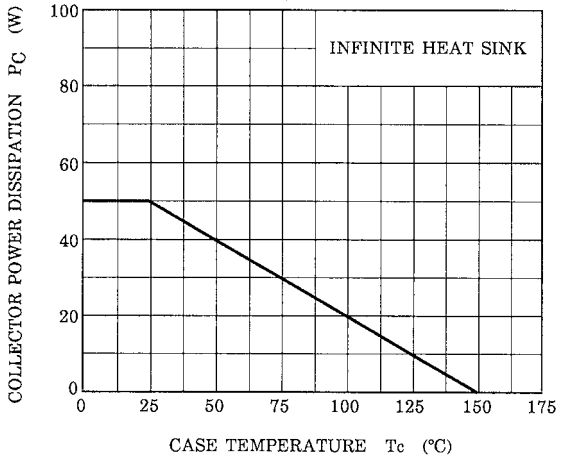
$r_{th\,(j\text{-}c)}$ – t_w



SAFE OPERATING AREA



P_C – Tc



- TOSHIBA is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to comply with the standards of