

TOSHIBA TRANSISTOR SILICON NPN TRIPLE DIFFUSED MESA TYPE

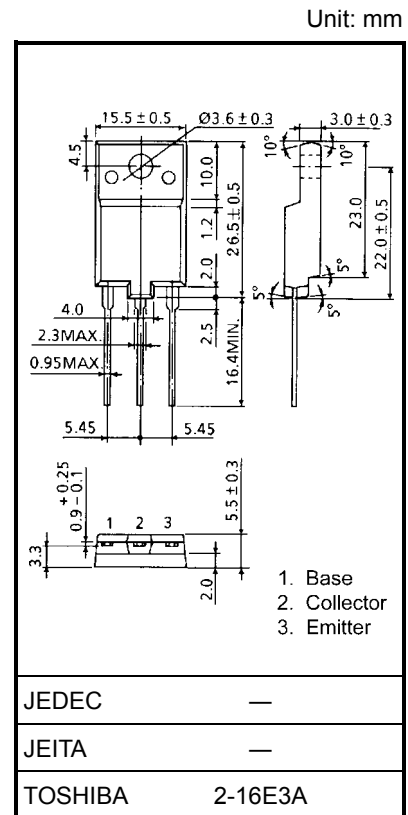
2SD2599

HORIZONTAL DEFLECTION OUTPUT FOR COLOR TV

- High Voltage : $V_{CBO} = 1500 \text{ V}$
- Low Saturation Voltage : $V_{CE(sat)} = 8 \text{ V (Max.)}$
- High Speed : $t_f = 0.5 \mu\text{s (Typ.)}$
- Built-in Damper Type
- Collector Metal (Fin) is Fully Covered with Mold Resin.

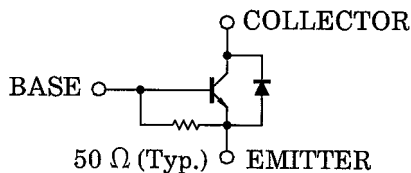
MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)

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	A
	Pulse	I_{CP}	
Base Current	I_B	1	A
Collector Power Dissipation	P_C	40	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$



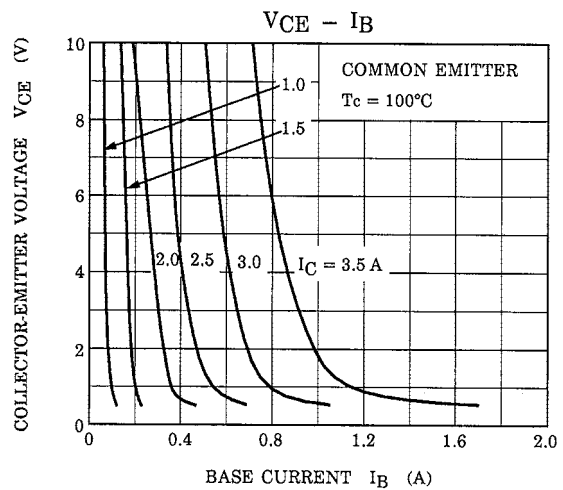
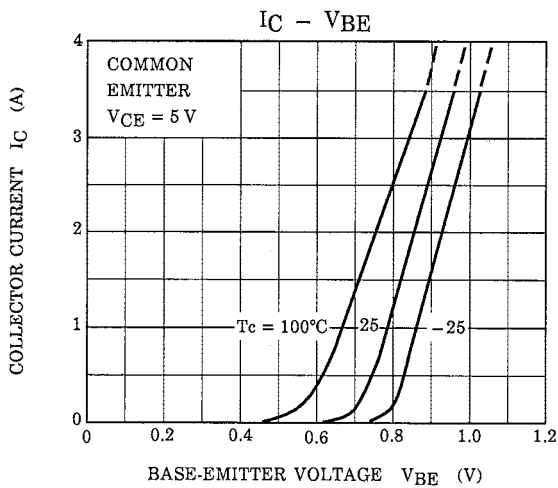
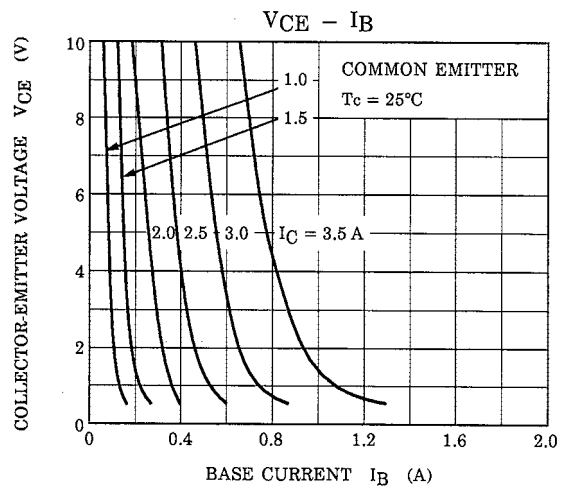
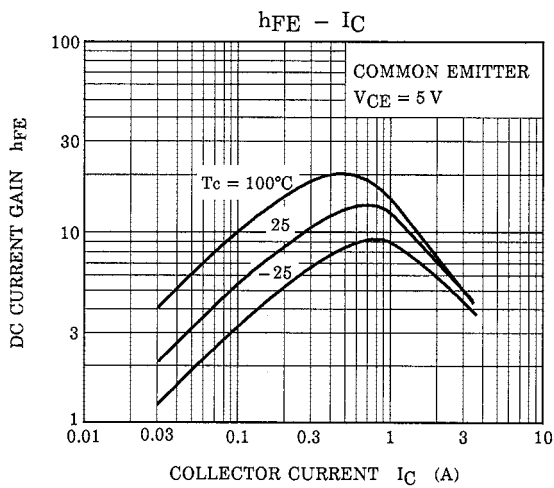
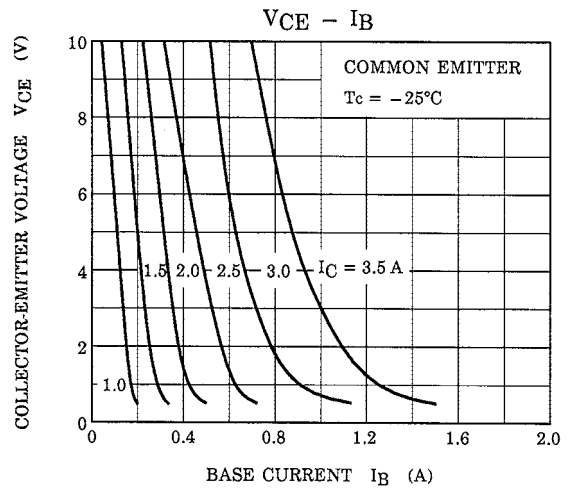
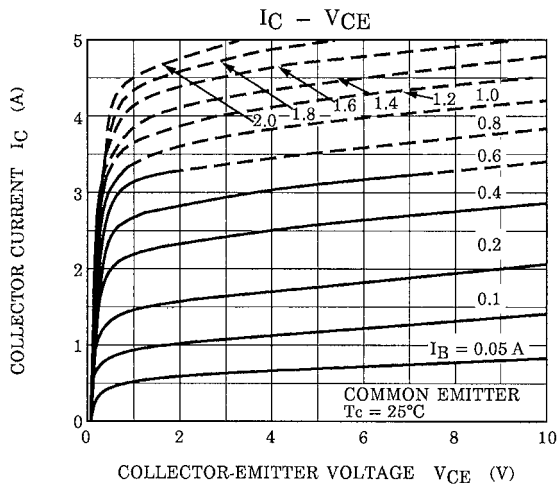
Weight: 5.5 g (typ.)

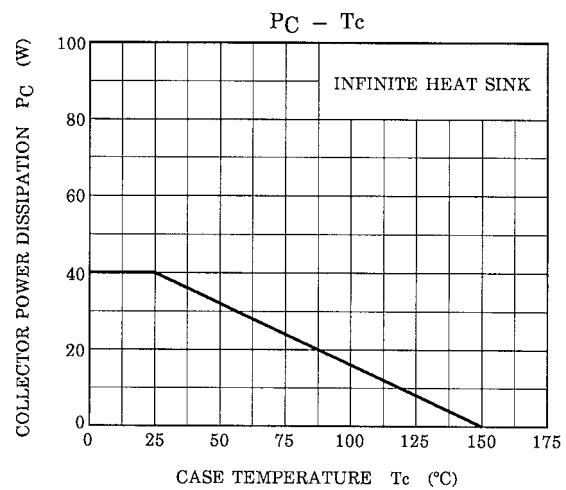
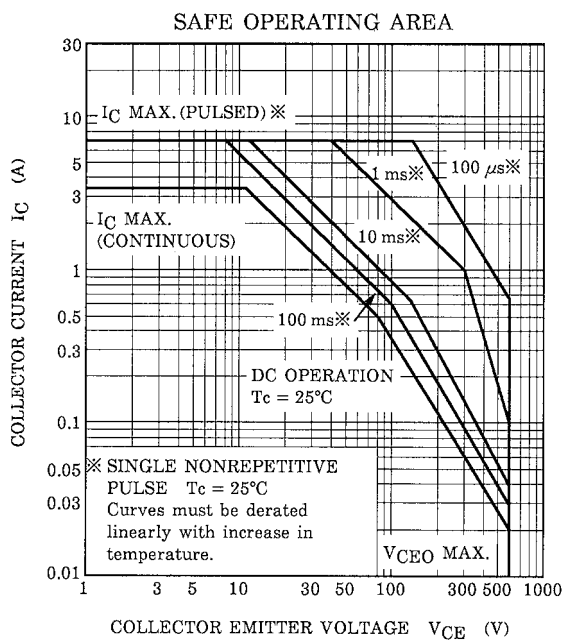
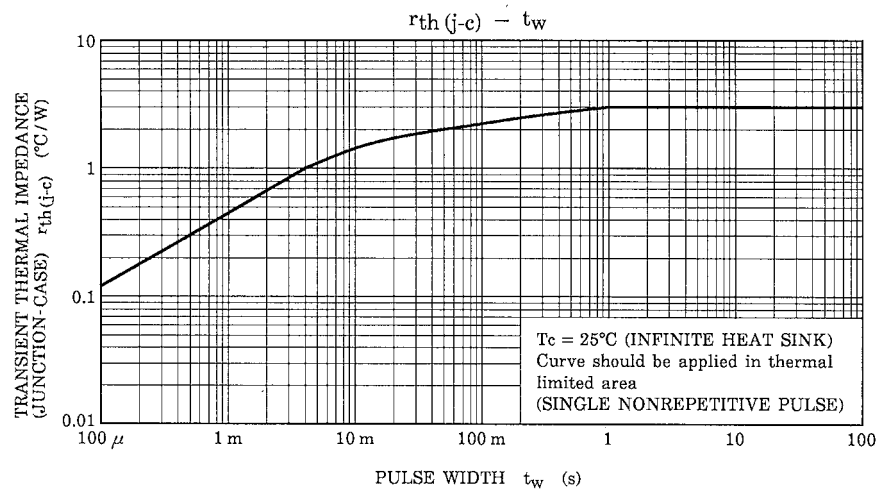
EQUIVALENT CIRCUIT



ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 1500 \text{ V}, I_E = 0$	—	—	1	mA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5 \text{ V}, I_C = 0$	66	—	200	mA
Emitter-Base Breakdown Voltage	$V_{(BR) EBO}$	$I_C = 300 \text{ mA}, I_C = 0$	5	—	—	V
DC Current Gain	h_{FE}	$V_{CE} = 5 \text{ V}, I_C = 0.5 \text{ A}$	8	—	25	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 3 \text{ A}, I_B = 0.8 \text{ A}$	—	5	8	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = 3 \text{ A}, I_B = 0.8 \text{ A}$	—	0.9	1.5	V
Forward Voltage (Damper Diode)	V_F	$I_F = 3.5 \text{ A}$	—	1.5	2.0	V
Transition Frequency	f_T	$V_{CE} = 10 \text{ V}, I_C = 0.1 \text{ A}$	—	3	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	—	55	—	pF
Switching Time	Storage Time	$I_{CP} = 3 \text{ A}, I_{B1}(\text{end}) = 0.8 \text{ A}$ $f_H = 15.75 \text{ kHz}$	—	7.5	10	μs
	Fall Time		—	0.5	1.0	





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