

TOSHIBA Transistor Silicon NPN Triple Diffused Mesa Type

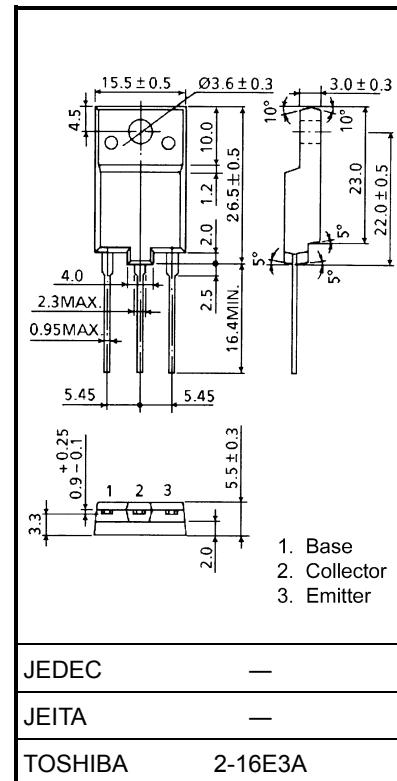
2SC5716Horizontal Deflection Output for High Resolution Display,
Color TV

Unit: mm

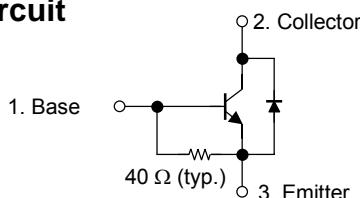
- High voltage: $V_{CBO} = 1700$ V
- High speed: $t_f(2) = 0.2 \mu\text{s}$ (typ.)
- Collector metal (fin) is fully covered with mold resin.

Maximum Ratings ($T_c = 25^\circ\text{C}$)

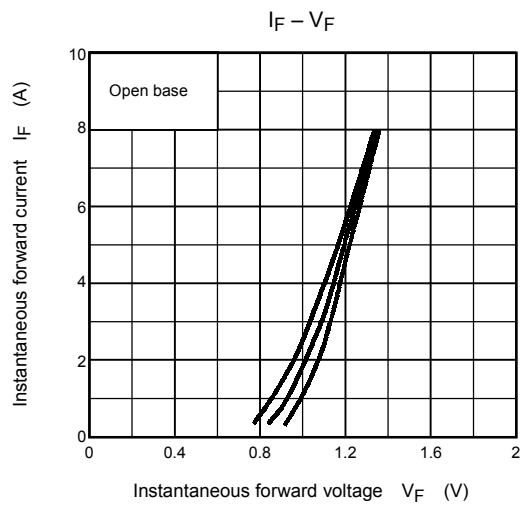
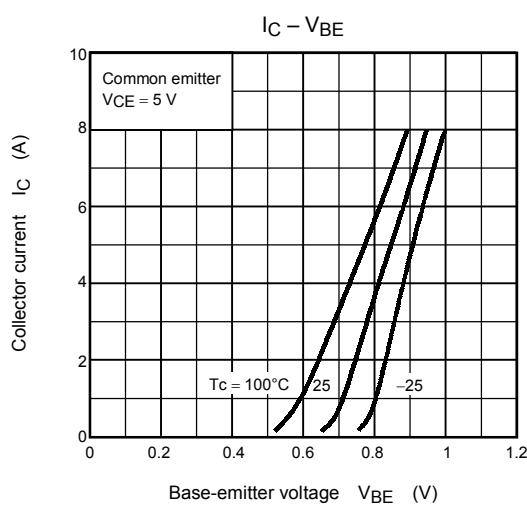
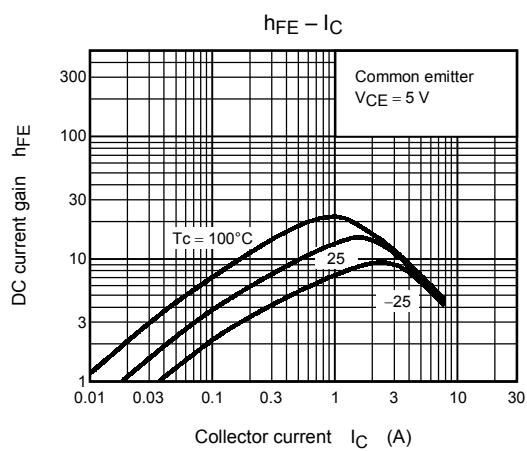
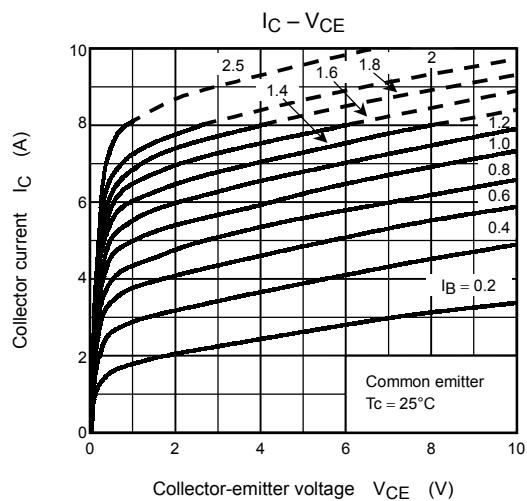
Characteristics		Symbol	Rating	Unit
Collector-base voltage		V_{CBO}	1700	V
Collector-emitter voltage		V_{CEO}	700	V
Emitter-base voltage		V_{EBO}	5	V
Collector current	DC	I_C	8	A
	Pulse	I_{CP}	16	
Base current		I_B	4	A
Collector power dissipation		P_C	55	W
Junction temperature		T_j	150	$^\circ\text{C}$
Storage temperature range		T_{stg}	-55~150	$^\circ\text{C}$

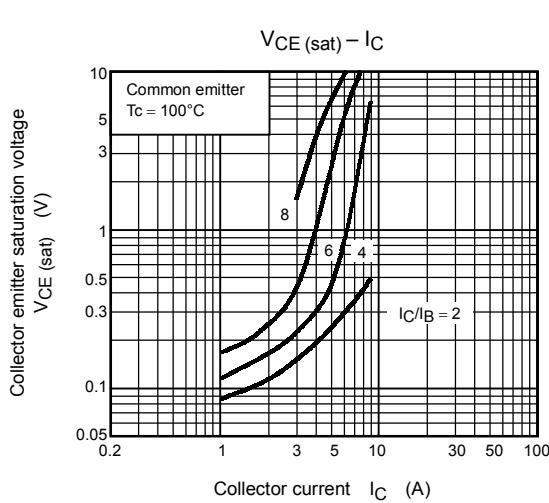
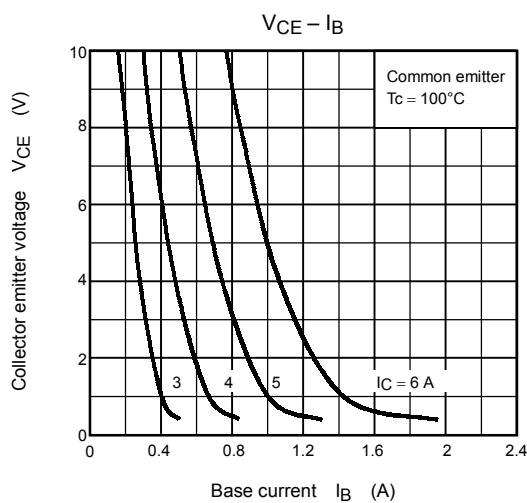
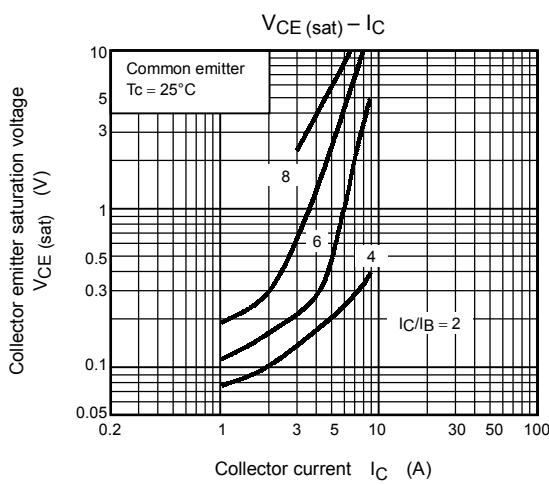
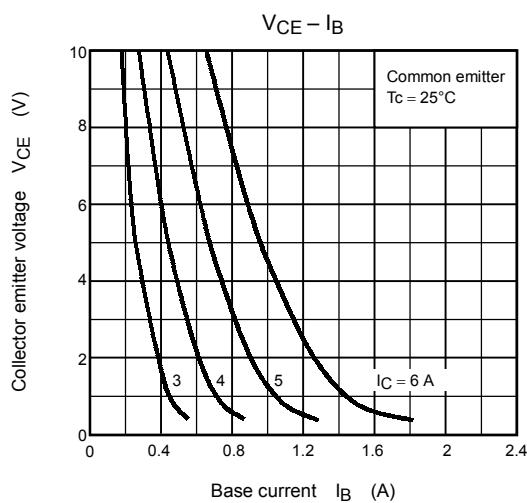
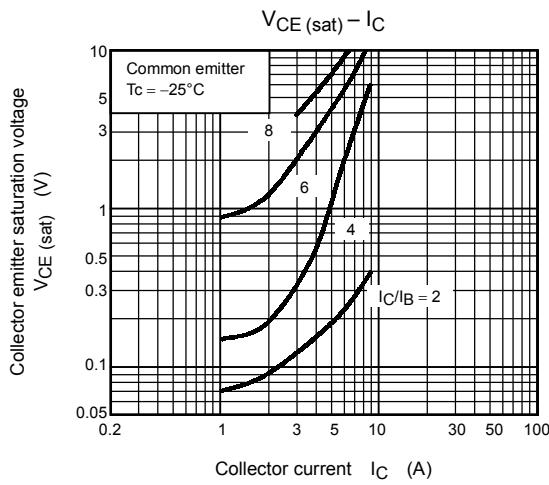
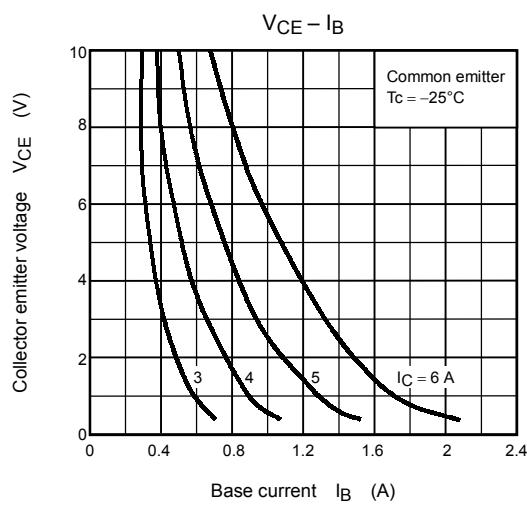


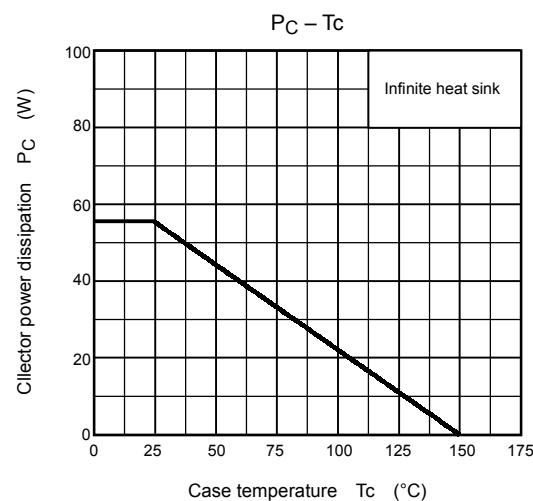
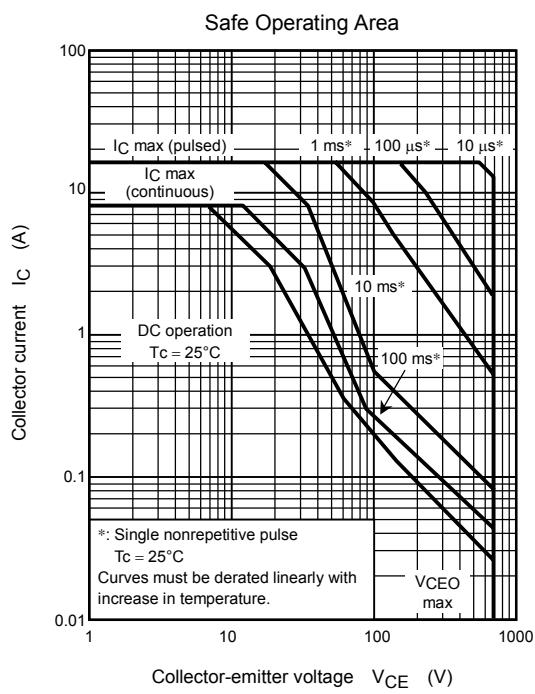
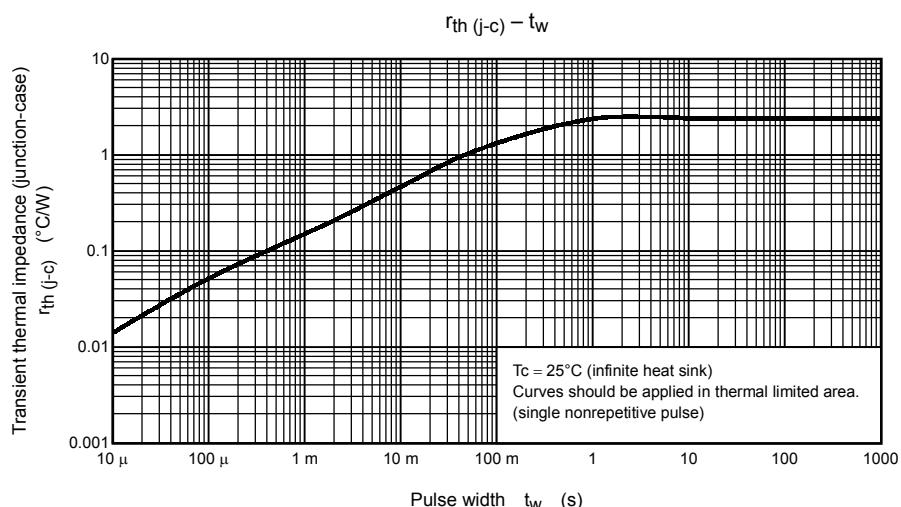
Weight: 5.5 g (typ.)

Equivalent Circuit**Electrical Characteristics ($T_c = 25^\circ\text{C}$)**

Characteristics		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, $I_C = 0$	83	—	250	mA
Emitter-base breakdown voltage		$V_{(BR) EBO}$	$I_E = 400$ mA, $I_B = 0$	5	—	—	V
DC current gain		h_{FE} (1)	$V_{CE} = 5$ V, $I_C = 1$ A	6	—	20	—
		h_{FE} (2)	$V_{CE} = 5$ V, $I_C = 6$ A	3.8	—	9	
Collector-emitter saturation voltage		$V_{CE (\text{sat})}$	$I_C = 6$ A, $I_B = 1.5$ A	—	—	5	V
Base-emitter saturation voltage		$V_{BE (\text{sat})}$	$I_C = 6$ A, $I_B = 1.5$ A	—	0.9	1.2	V
Forward voltage (damper diode)		V_F	$I_F = 6$ A	—	1.3	1.8	V
Transition frequency		f_T	$V_{CE} = 10$ V, $I_C = 0.1$ A	—	2	—	MHz
Collector output capacitance		C_{ob}	$V_{CB} = 10$ V, $I_E = 0$, $f = 1$ MHz	—	180	—	pF
Switching time	Storage time	t_{stg} (1)	$I_{CP} = 6$ A, $I_{B1(\text{end})} = 1.2$ A, $f_H = 15.75$ kHz	—	6	8	μs
	Fall time	t_f (1)		—	0.3	0.6	
	Storage time	t_{stg} (2)		—	3.5	5	
	Fall time	t_f (2)		—	0.2	0.35	







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