

TOSHIBA Transistor Silicon NPN Triple Diffused Mesa Type

2SC5717

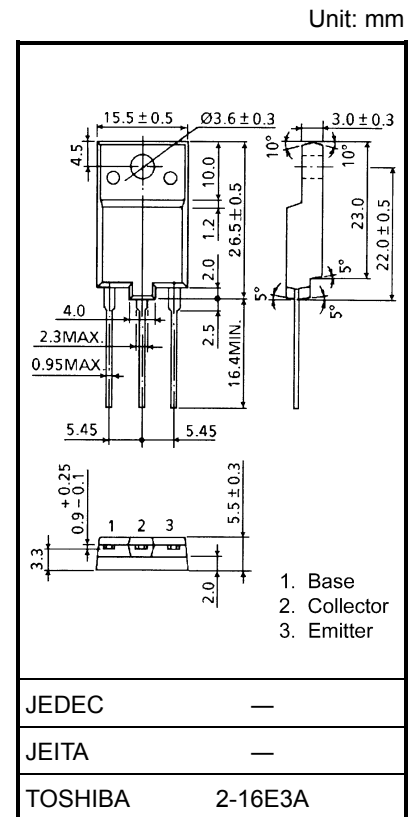
Horizontal Deflection Output for Super High Resolution Display, Color TV, Digital TV.

High Speed Switching Applications.

- High voltage: $V_{CBO} = 1500 \text{ V}$
- Low saturation voltage: $V_{CE(sat)} = 3 \text{ V (max)}$
- High speed: $t_f(2) = 0.1 \mu\text{s (typ.)}$

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

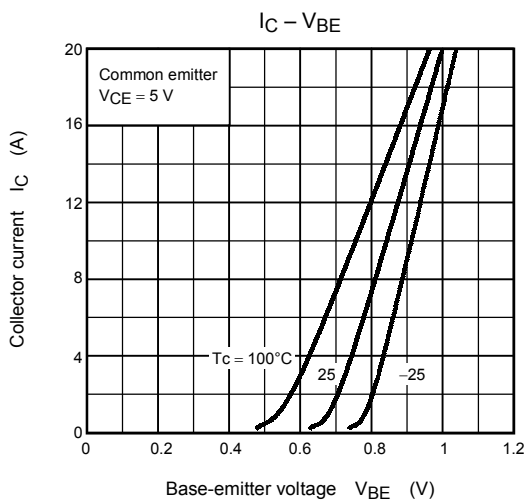
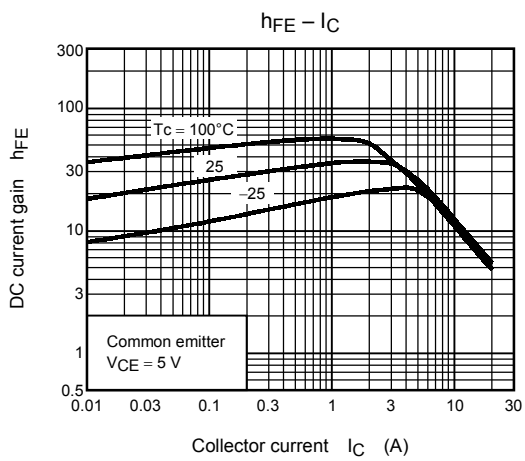
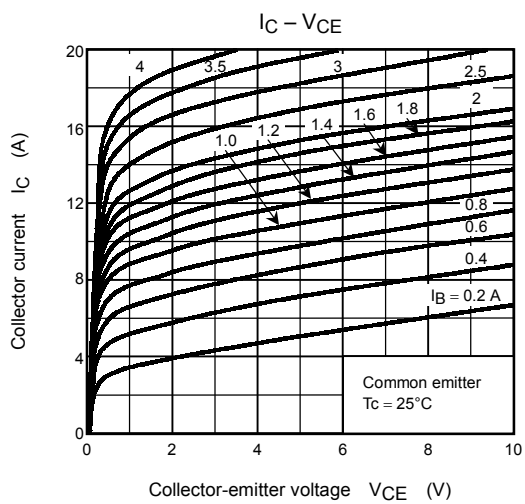
Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	1500	V
Collector-emitter voltage	V_{CEO}	700	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	DC	I_C	A
	Pulse	I_{CP}	
Base current	I_B	10.5	A
Collector power dissipation	P_C	75	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	$-55 \sim 150$	$^\circ\text{C}$

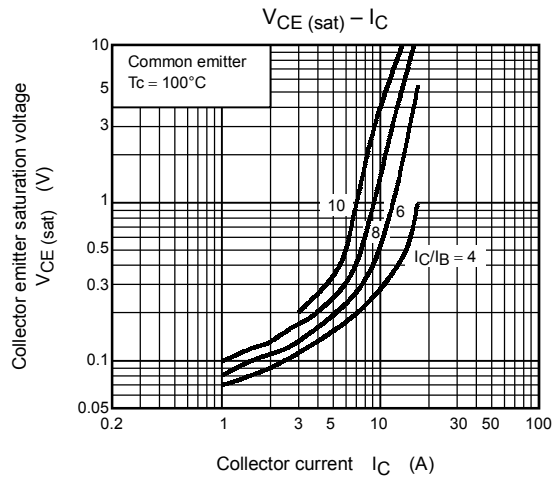
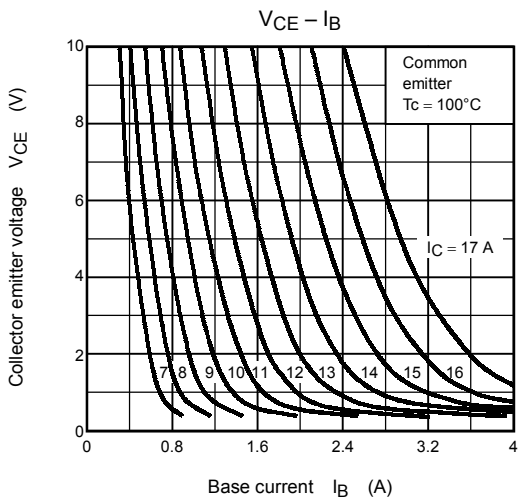
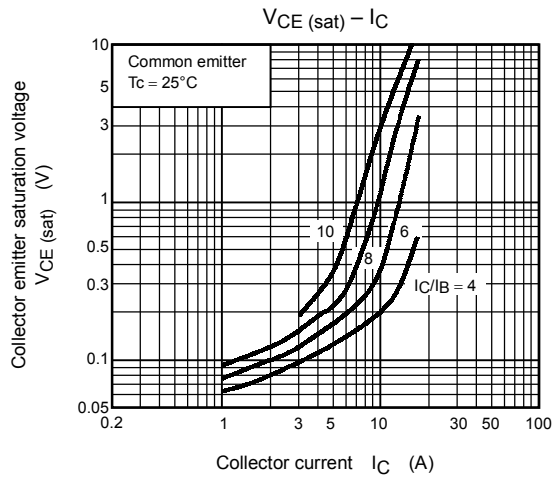
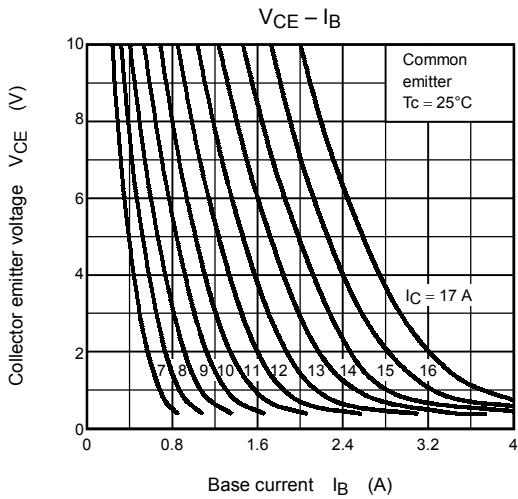
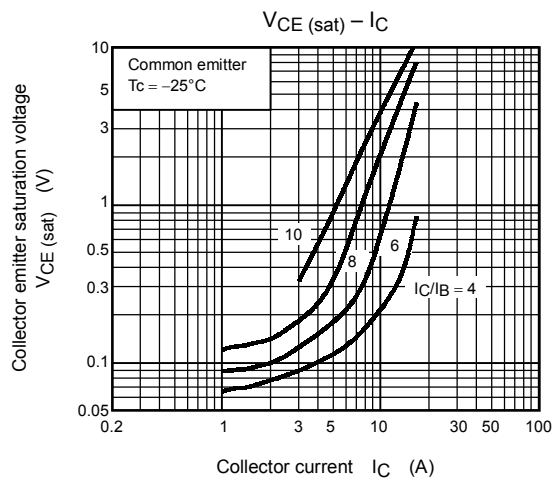
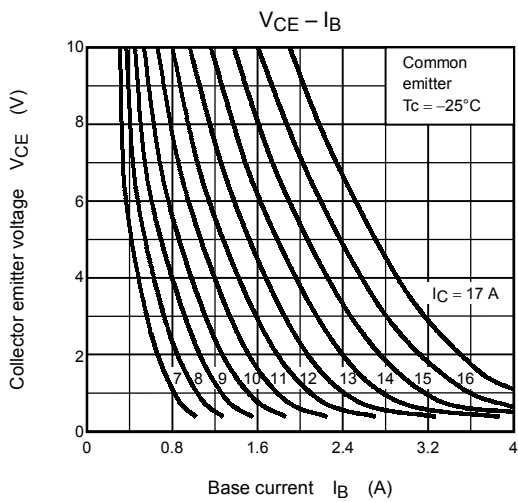


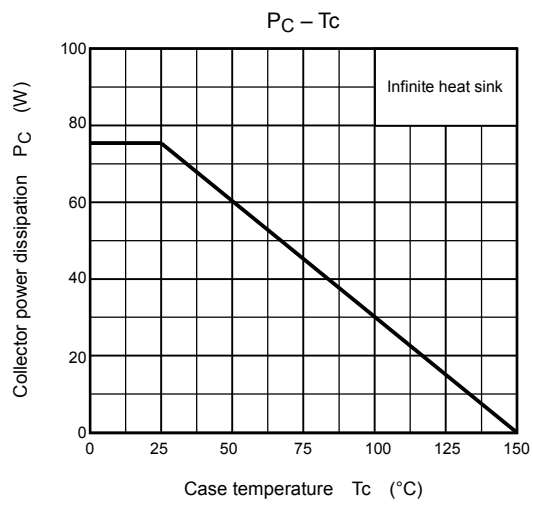
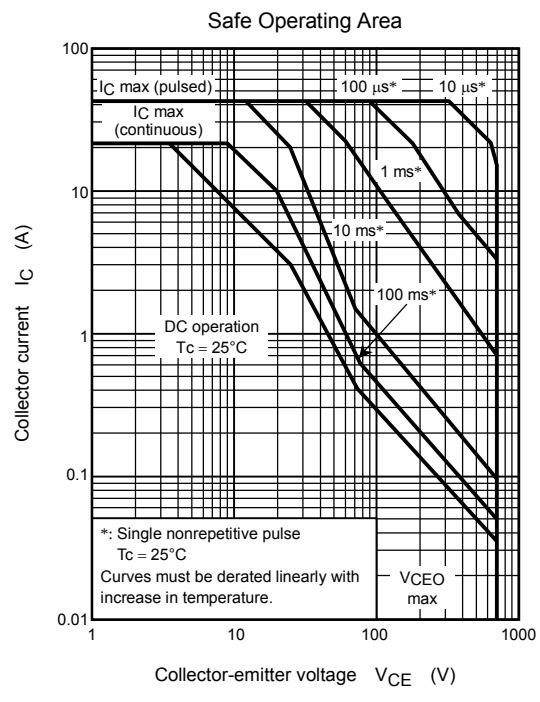
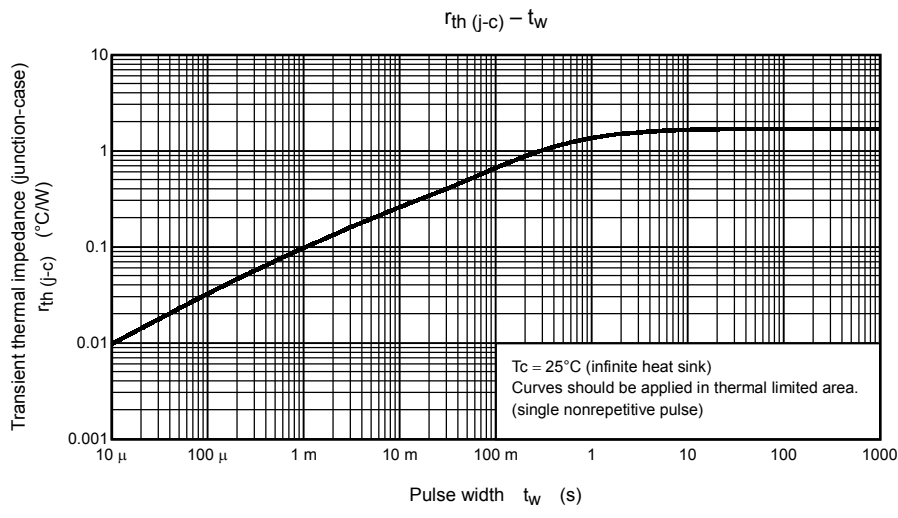
Weight: 5.5 g (typ.)

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

Characteristics	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}	$V_{EB} = 5 \text{ V}, I_C = 0$	—	—	10	μA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_E = 10 \text{ mA}, I_B = 0$	700			V
DC current gain	$h_{FE(1)}$	$V_{CE} = 5 \text{ V}, I_C = 2 \text{ A}$	20	—	50	—
	$h_{FE(2)}$	$V_{CE} = 5 \text{ V}, I_C = 10 \text{ A}$	8	—	17	
	$h_{FE(3)}$	$V_{CE} = 5 \text{ V}, I_C = 17 \text{ A}$	4.8	—	8.3	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 17 \text{ A}, I_B = 4.25 \text{ A}$	—	—	3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 17 \text{ A}, I_B = 4.25 \text{ A}$	—	1.0	1.5	V
Transition frequency	f_T	$V_{CE} = 10 \text{ V}, I_C = 0.1 \text{ A}$	—	2	—	MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	—	240	—	pF
Switching time	Storage time	$t_{stg(1)}$	—	2.5	3	μs
	Fall time	$t_f(1)$		0.15	0.3	
	Storage time	$t_{stg(2)}$	—	1.6	1.8	
	Fall time	$t_f(2)$		0.1	0.15	







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