

TOSHIBA Transistor Silicon NPN Triple-Diffused Mesa Type

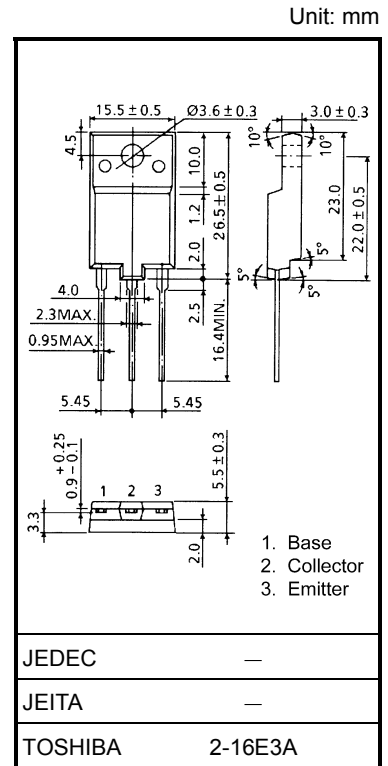
# 2SC6041

Horizontal Deflection Output for HDTV,  
Digital TV, Projection TV.

- High voltage :  $V_{CBO} = 1700\text{ V}$
- Low saturation voltage :  $V_{CE(sat)} = 1.5\text{ V (max)}$
- High speed :  $t_f = 0.15\text{ }\mu\text{s (typ.)}$
- Collector metal (fin) is fully covered with mold resin.

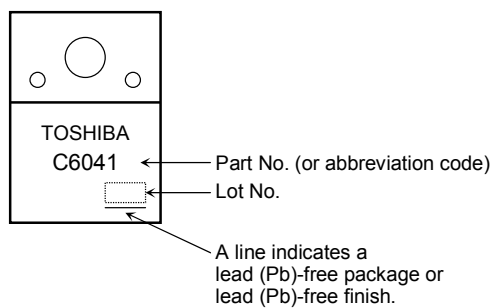
### Maximum Ratings ( $T_C = 25^\circ\text{C}$ )

Characteristic	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	1700	V
Collector-emitter voltage	$V_{CEO}$	750	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	DC	$I_C$	15
	Pulse	$I_{CP}$	30
Base current	$I_B$	7.5	A
Collector power dissipation	$P_C$	70	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-55 to 150	$^\circ\text{C}$



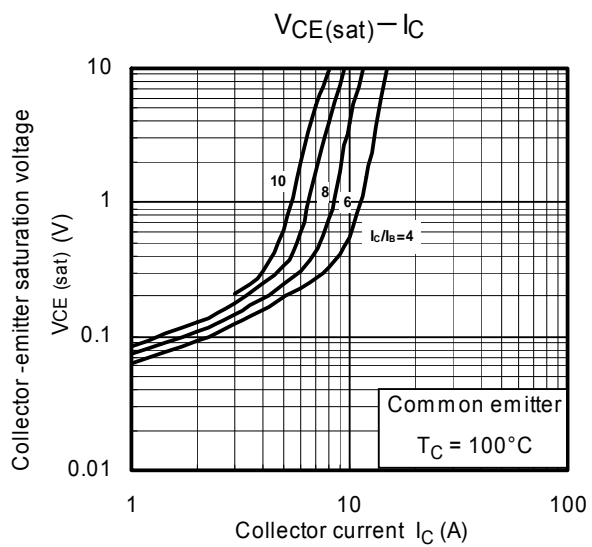
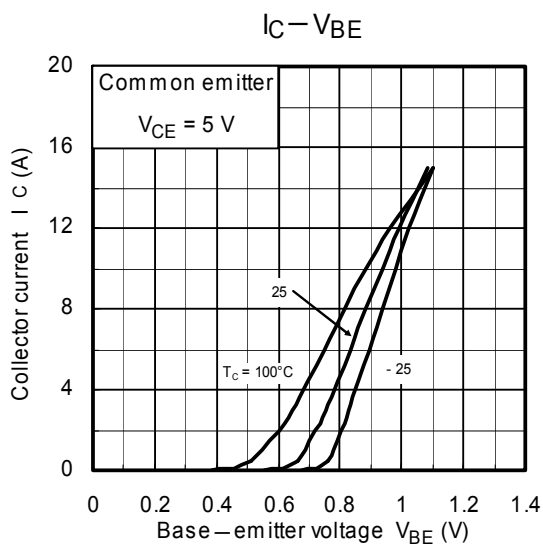
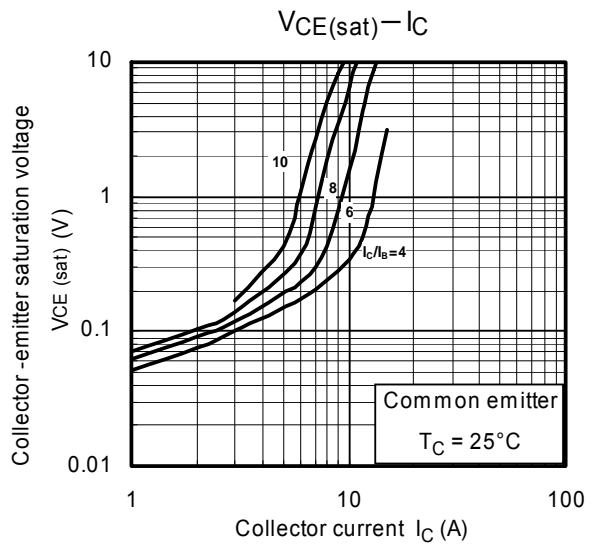
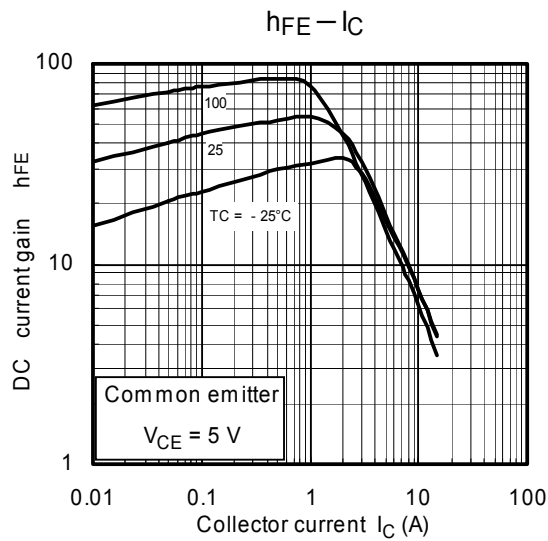
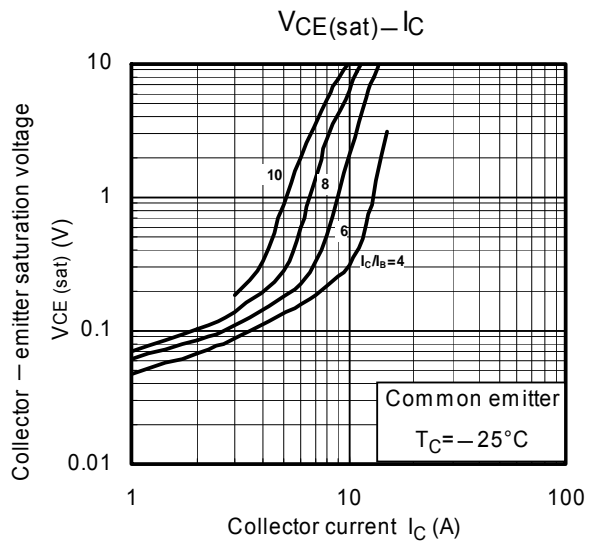
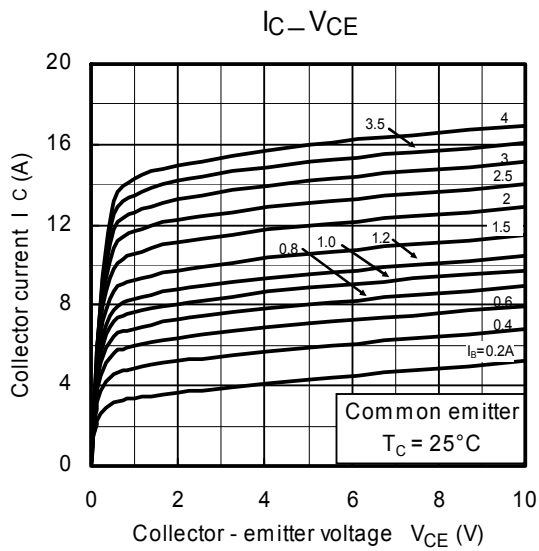
Weight: 5.5 g (typ.)

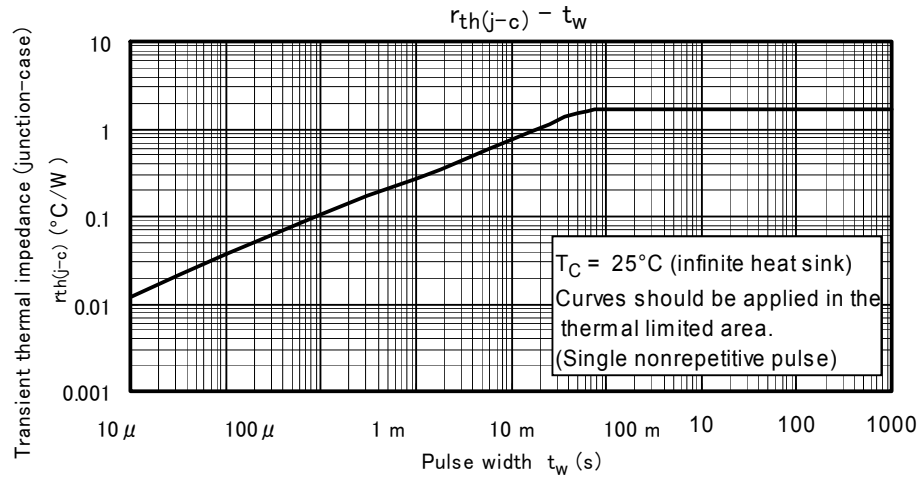
### Marking



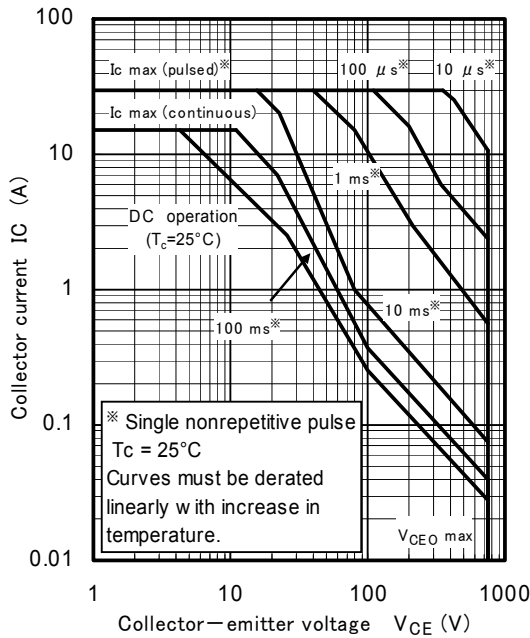
**Electrical Characteristics (T<sub>C</sub> = 25°C)**

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = 1700 V, I <sub>E</sub> = 0	—	—	1	mA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0	—	—	100	μA
Emitter–base breakdown voltage	V <sub>(BR) EBO</sub>	I <sub>E</sub> = 1 mA, I <sub>B</sub> = 0	5	—	—	V
DC current gain	h <sub>FE</sub> (1)	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 2 A	30	—	60	—
	h <sub>FE</sub> (2)	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 8 A	8	—	12	
	h <sub>FE</sub> (3)	V <sub>CE</sub> = 5 V, I <sub>C</sub> = 12 A	5	—	7	
Collector–emitter saturation voltage	V <sub>CE (sat)</sub>	I <sub>C</sub> = 12 A, I <sub>B</sub> = 3 A	—	—	1.5	V
Base–emitter saturation voltage	V <sub>BE (sat)</sub>	I <sub>C</sub> = 12 A, I <sub>B</sub> = 3 A	—	—	1.25	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = 10 V, I <sub>C</sub> = 0.1 A	—	2	—	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 10 V, I <sub>E</sub> = 0, f = 1 MHz	—	260	—	pF
Switching time	Storage time	I <sub>CP</sub> = 6 A, I <sub>B1</sub> (end) = 0.8 A f <sub>H</sub> = 32 kHz	—	4	—	μs
	Fall time		—	0.15	—	

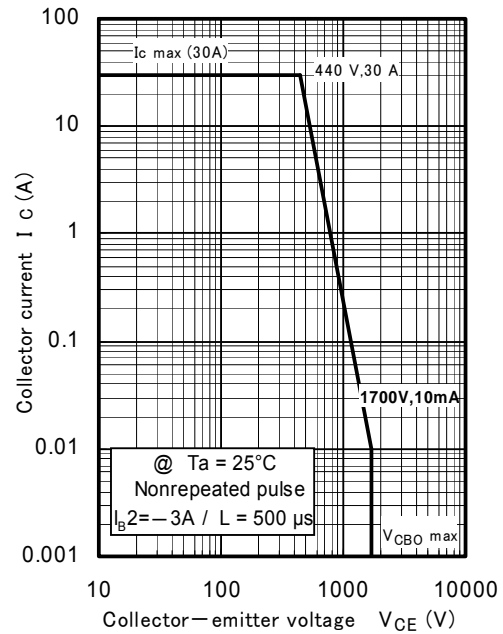




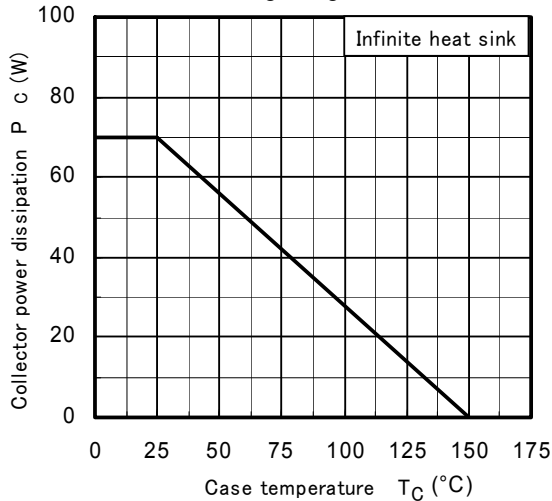
Safe Operating Area



Reverse Bias—Safe Operating Area



$P_C - T_C$



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