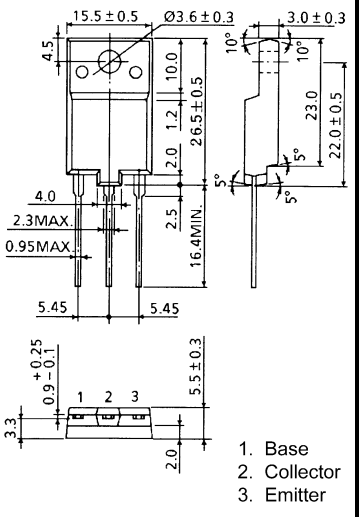
TOSHIBA Transistor Silicon NPN Triple-Diffused Mesa Type

2SC6041

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

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

Unit: mm



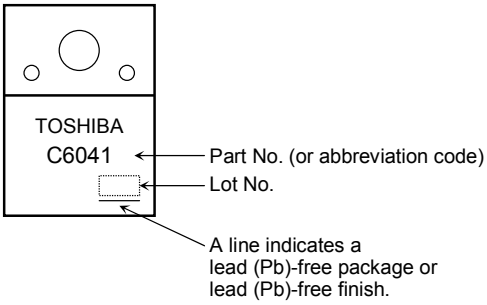
JEDEC	―
JEITA	―
TOSHIBA	2-16E3A

Weight: 5.5 g (typ.)

Maximum Ratings (T_C = 25°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	A
	Pulse	I_{CP}	30	
Base current		I_B	7.5	A
Collector power dissipation		P_C	70	W
Junction temperature		T_j	150	°C
Storage temperature range		T_{stg}	−55 to 150	°C

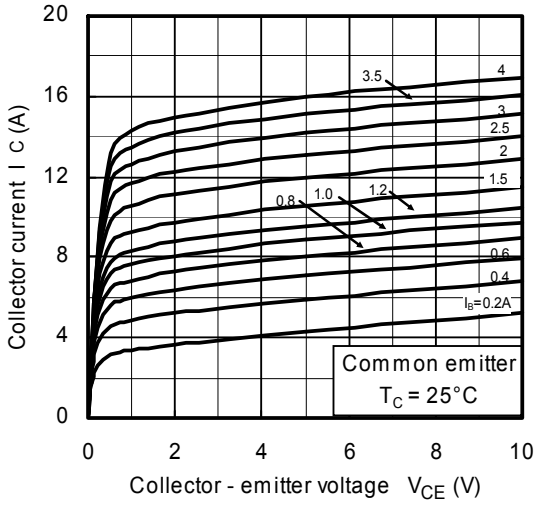
Marking



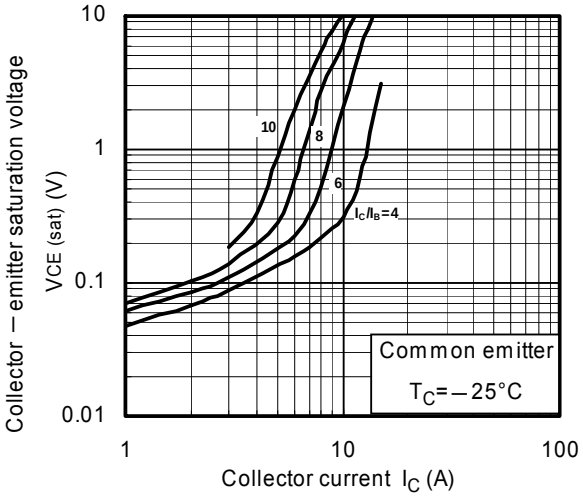
Electrical Characteristics (T_C = 25°C)

Characteristic		Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cutoff current		I_{CBO}	V_{CB} = 1700 V, I_E = 0	—	—	1	mA
Emitter cutoff current		I_{EBO}	V_{EB} = 5 V, I_C = 0	—	—	100	μA
Emitter–base breakdown voltage		$V_{(BR)\ EBO}$	I_E = 1 mA, I_B = 0	5	—	—	V
DC current gain		$h_{FE\ (1)}$	V_{CE} = 5 V, I_C = 2 A	30	—	60	—
		$h_{FE\ (2)}$	V_{CE} = 5 V, I_C = 8 A	8	—	12	
		$h_{FE\ (3)}$	V_{CE} = 5 V, I_C = 12 A	5	—	7	
Collector–emitter saturation voltage		$V_{CE\ (sat)}$	I_C = 12 A, I_B = 3 A	—	—	1.5	V
Base–emitter saturation voltage		$V_{BE\ (sat)}$	I_C = 12 A, I_B = 3 A	—	—	1.25	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	—	260	—	pF
Switching time	Storage time	t_{stg}	I_{CP} = 6 A, I_{B1} (end) = 0.8 A f_H = 32 kHz	—	4	—	μs
	Fall time	t_f		—	0.15	—	

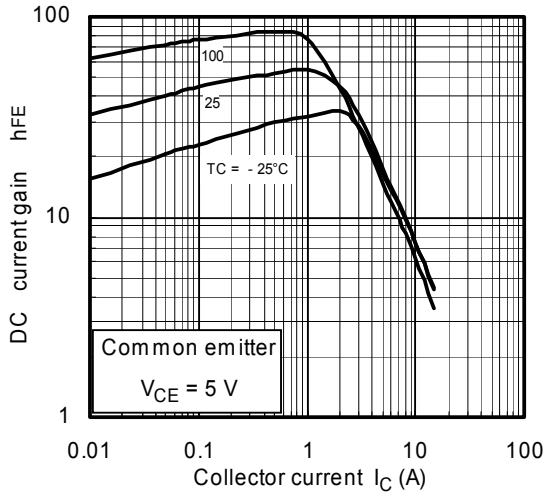
$I_C - V_{CE}$



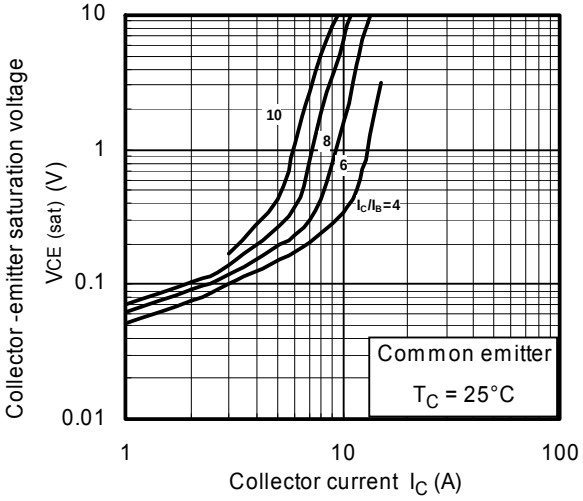
$V_{CE(sat)} - I_C$



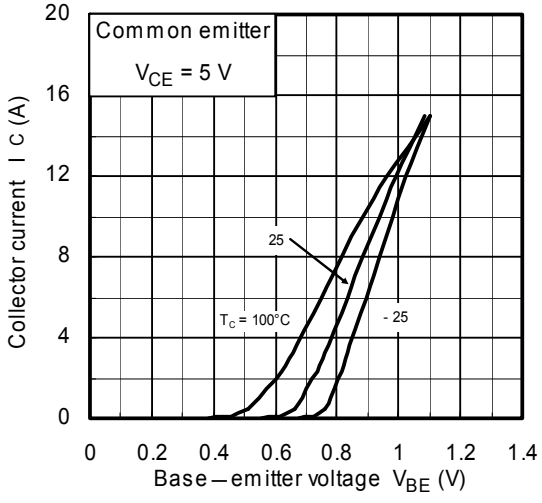
$h_{FE} - I_C$



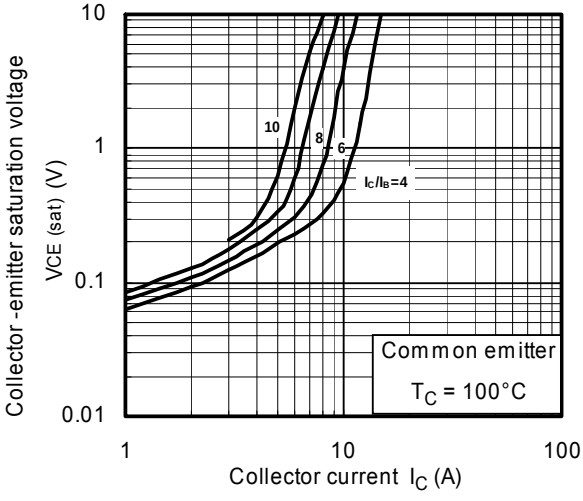
$V_{CE(sat)} - I_C$



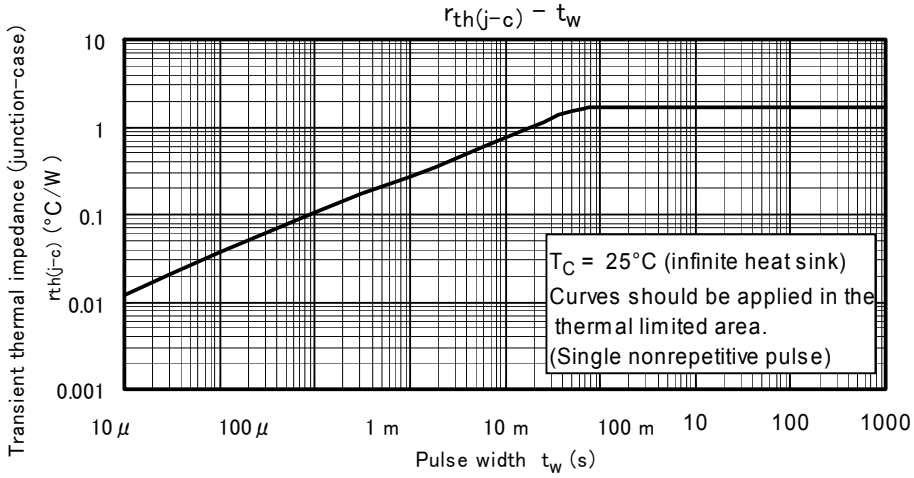
$I_C - V_{BE}$



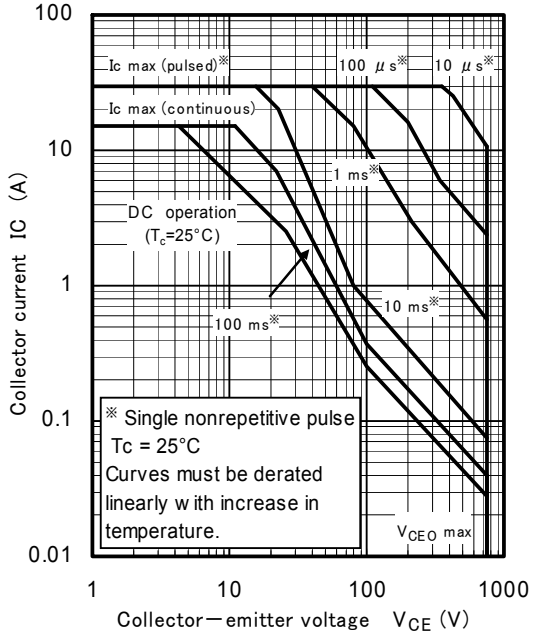
$V_{CE(sat)} - I_C$



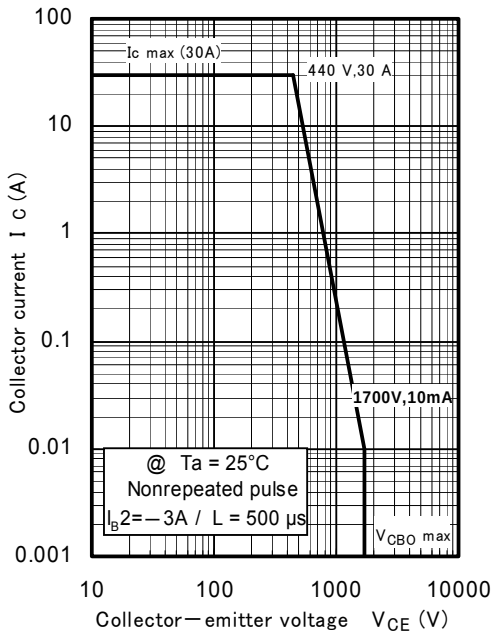
$r_{th(j-c)} - t_w$



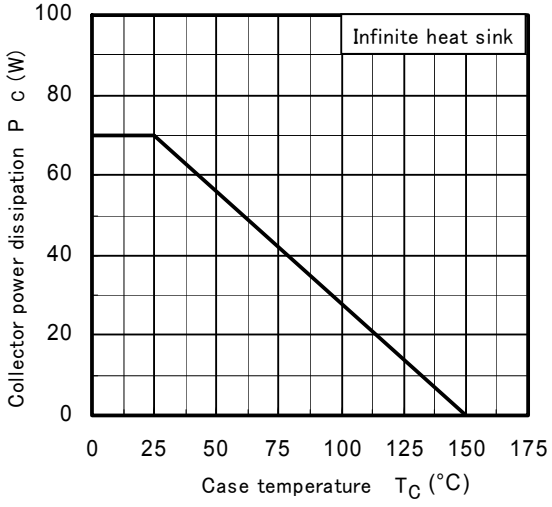
Safe Operating Area



Reverse Bias−Safe Operating Aria



$P_C - T_C$



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