

TOSHIBA Transistor Silicon NPN Triple Diffuse Type (PCT Process)

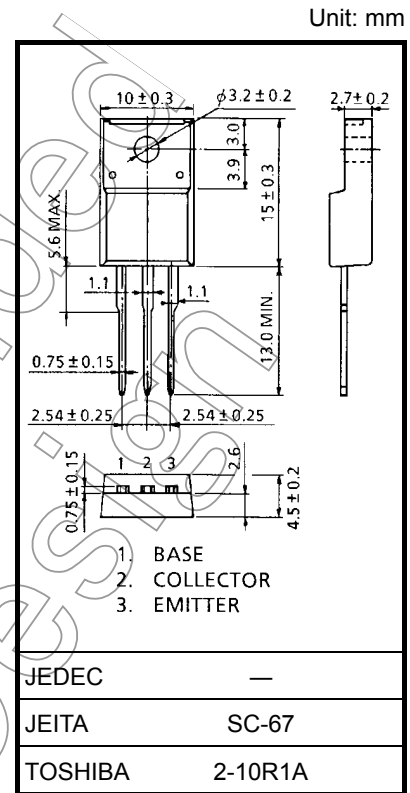
# 2SC4544

High-Voltage Switching and Amplifier Applications  
 Color TV Horizontal Driver Applications  
 Color TV Chroma Output Applications

- High voltage:  $V(BR)_{CEO} = 300\text{ V}$
- Small collector output capacitance:  $C_{ob} = 3.0\text{ pF (typ.)}$
- Collector metal (fin) is fully covered with mold resin.

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

Characteristics		Symbol	Rating	Unit
Collector-base voltage		$V_{CBO}$	300	V
Collector-emitter voltage		$V_{CEO}$	300	V
Emitter-base voltage		$V_{EBO}$	7	V
Collector current		$I_C$	100	mA
Base current		$I_B$	50	mA
Collector power dissipation	$T_a = 25^\circ\text{C}$	$P_C$	2	W
	$T_c = 25^\circ\text{C}$		8	
Junction temperature		$T_j$	150	$^\circ\text{C}$
Storage temperature range		$T_{stg}$	-55 to 150	$^\circ\text{C}$



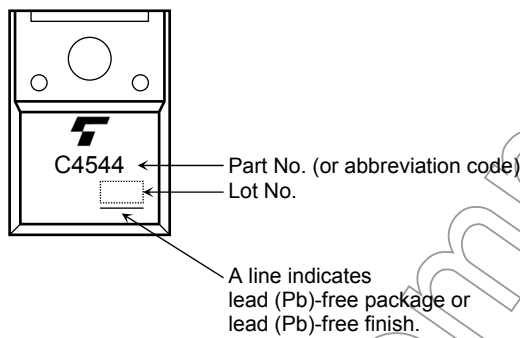
Weight: 1.7 g (typ.)

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.  
 Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/Derating Concept and Methods) and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

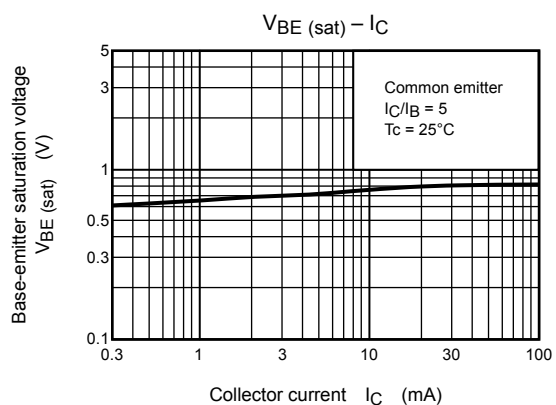
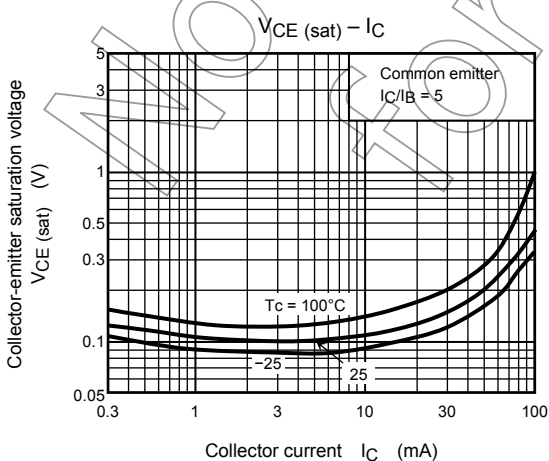
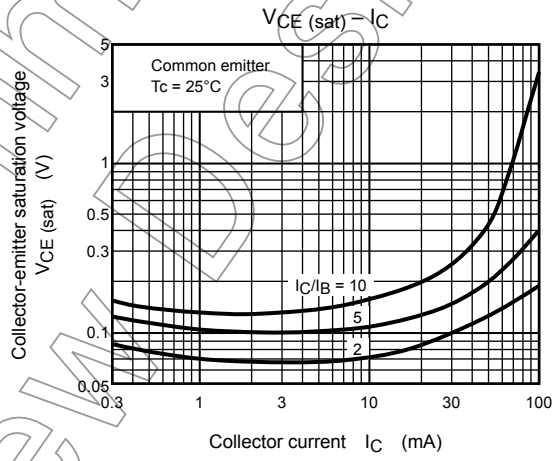
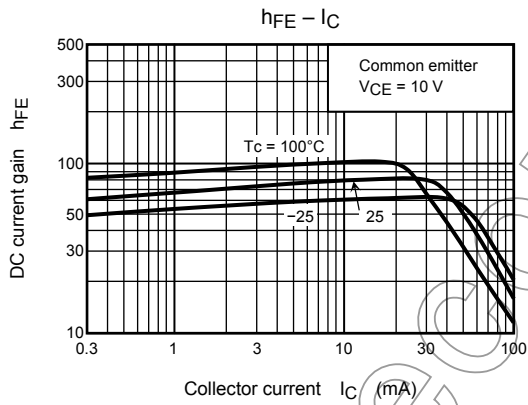
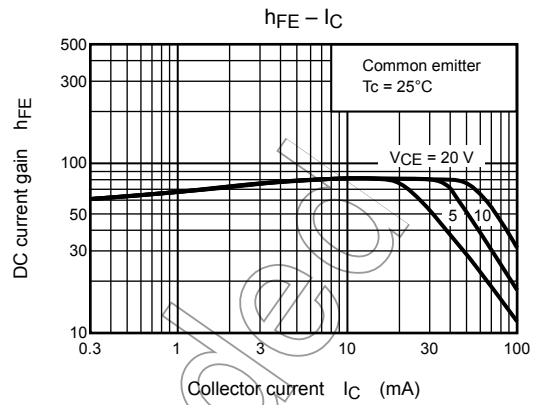
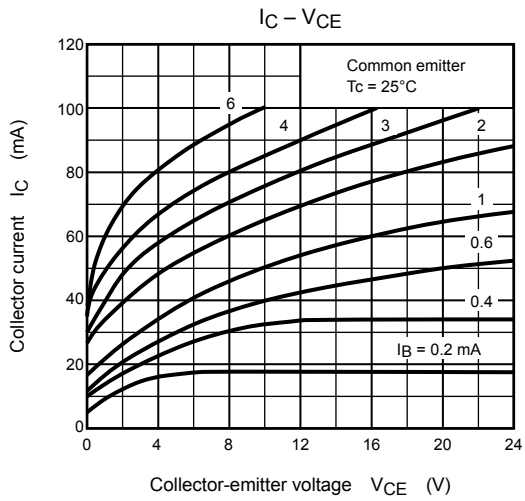
## Electrical Characteristics (Tc = 25°C)

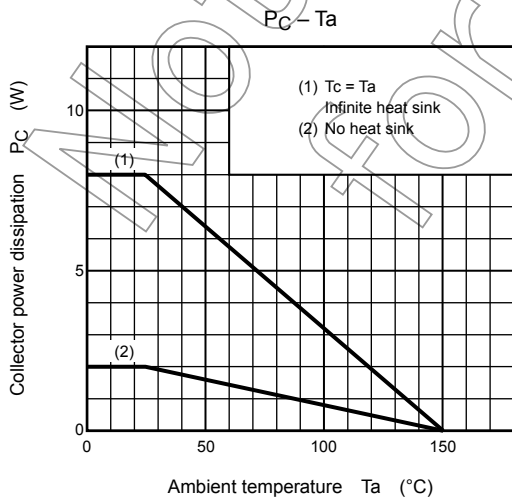
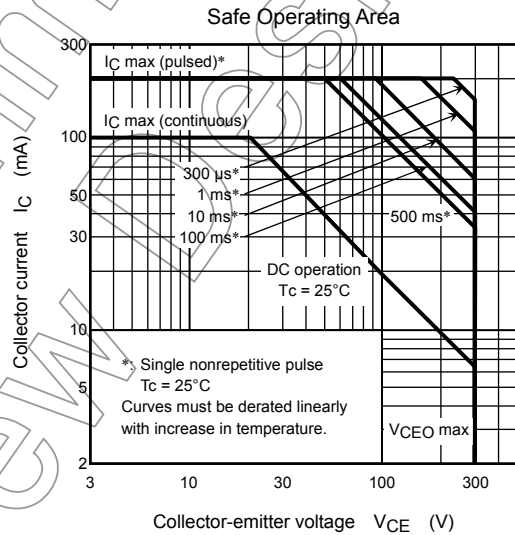
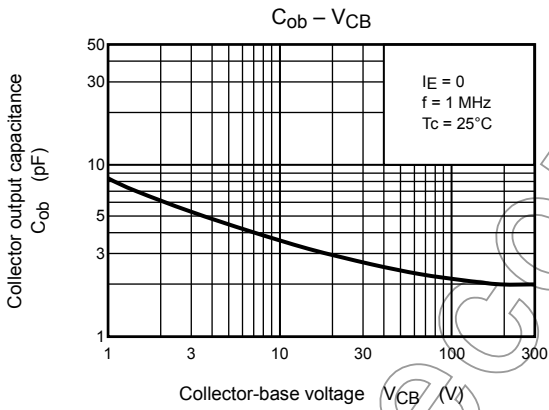
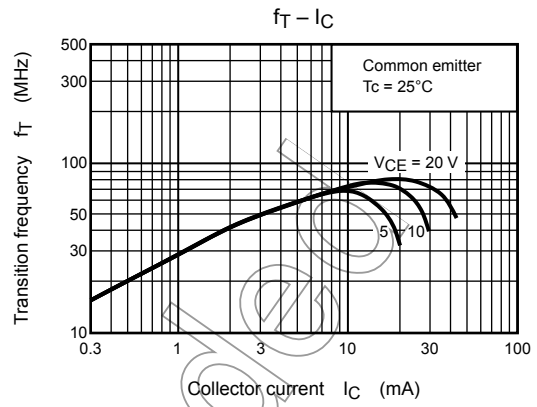
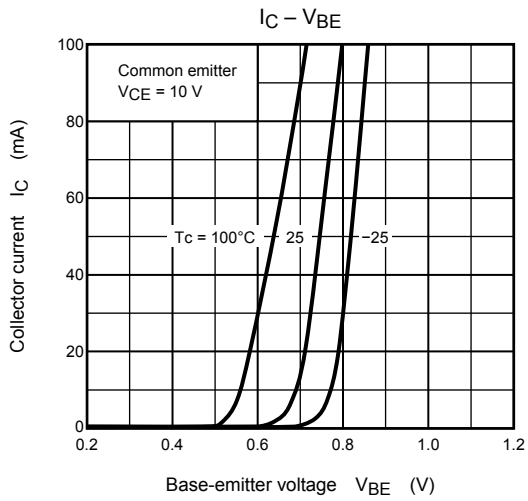
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 240\text{ V}, I_E = 0$	—	—	1.0	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 7\text{ V}, I_C = 0$	—	—	1.0	$\mu\text{A}$
DC current gain	$h_{FE} (1)$	$V_{CE} = 10\text{ V}, I_C = 4\text{ mA}$	20	—	—	
	$h_{FE} (2)$	$V_{CE} = 10\text{ V}, I_C = 20\text{ mA}$	30	—	200	
Collector-emitter saturation voltage	$V_{CE} (\text{sat})$	$I_C = 10\text{ mA}, I_B = 1\text{ mA}$	—	—	1.0	V
Base-emitter saturation voltage	$V_{BE} (\text{sat})$	$I_C = 10\text{ mA}, I_B = 1\text{ mA}$	—	—	1.0	V
Transition frequency	$f_T$	$V_{CE} = 10\text{ V}, I_C = 20\text{ mA}$	50	70	—	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 20\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	3.0	—	pF

## Marking



Not Recommended for New Design





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