

TOSHIBA Transistor Silicon NPN Triple Diffused Type (PCT Process)

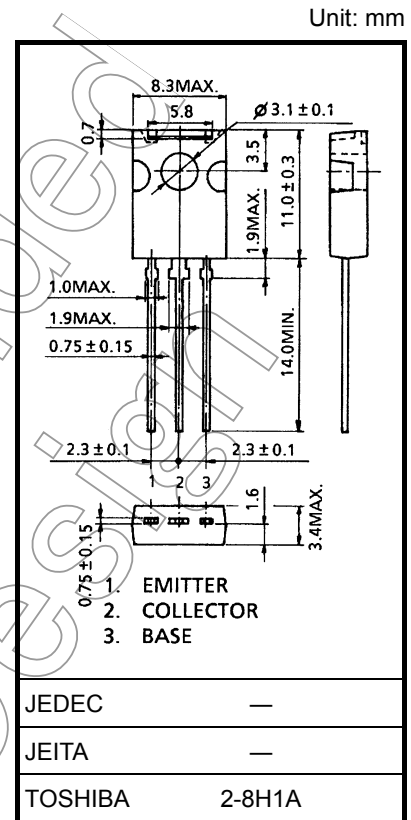
2SC3619

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

- High breakdown voltage: $V_{CEO} = 300\text{ V}$
- Small collector output capacitance: $C_{ob} = 3.0\text{ pF (typ.)}$

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	1.5	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 to 150	$^\circ\text{C}$



Weight: 0.82 g (typ.)

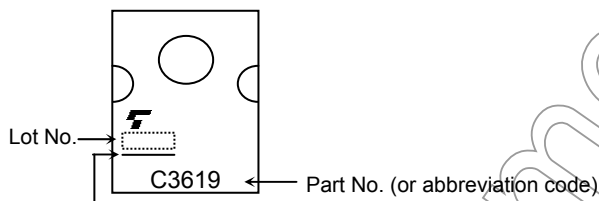
Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).

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Electrical Characteristics (Tc = 25°C)

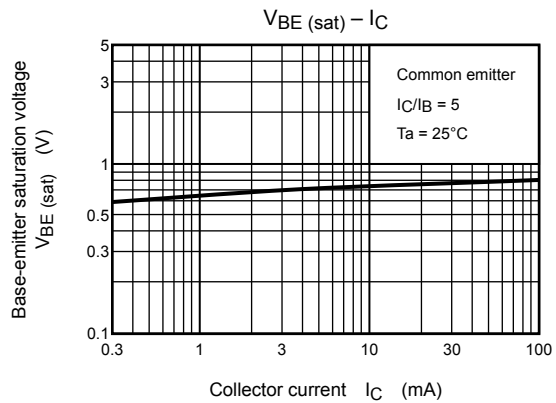
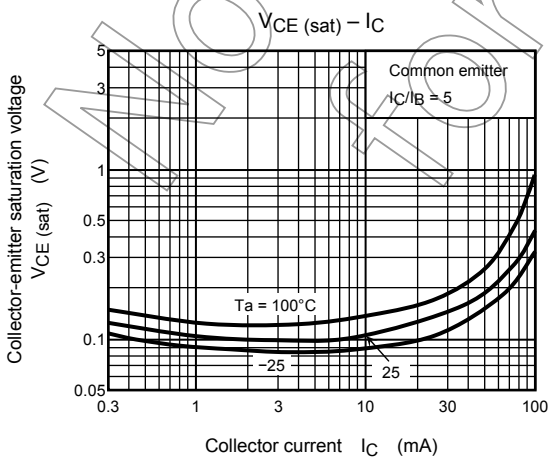
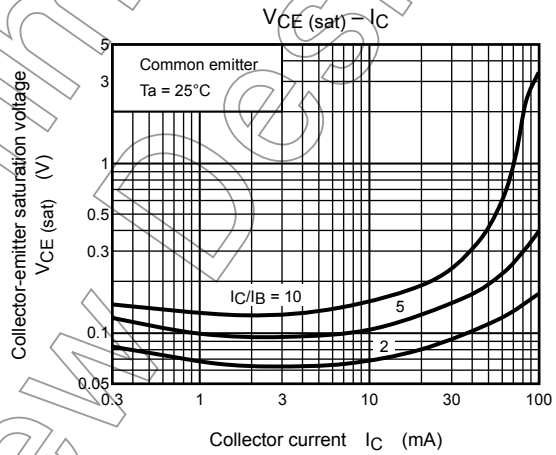
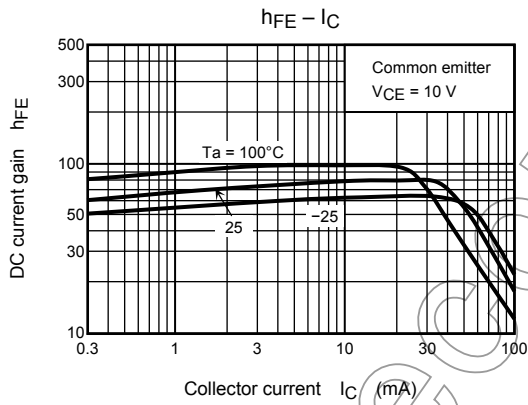
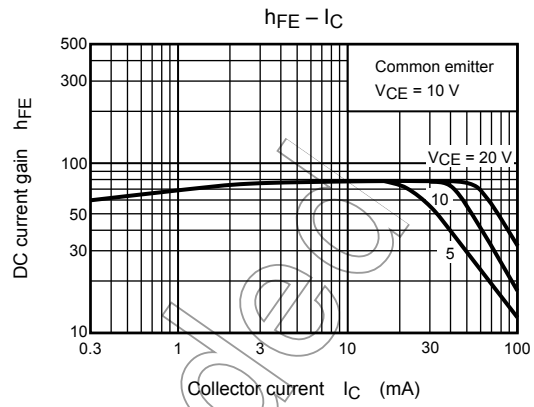
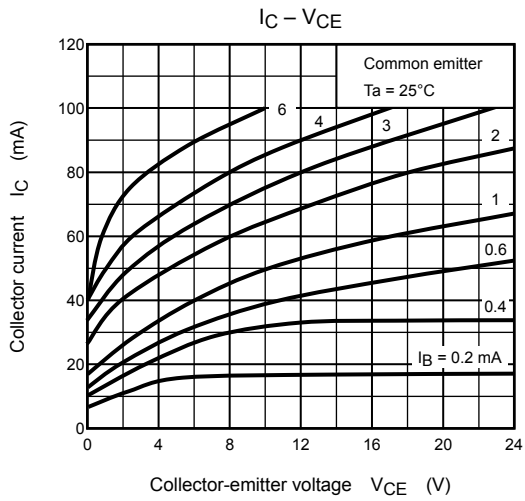
Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 240\text{ V}, I_E = 0$	—	—	1.0	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 7\text{ V}, I_C = 0$	—	—	1.0	μA
DC current gain	$h_{FE} (1)$	$V_{CE} = 10\text{ V}, I_C = 4\text{ mA}$	20	—	—	
	$h_{FE} (2)$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

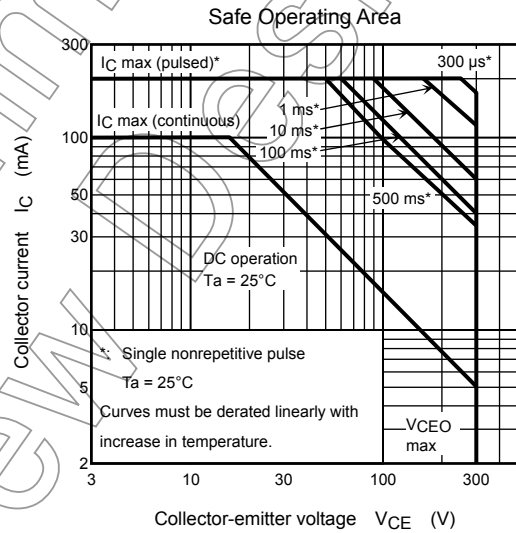
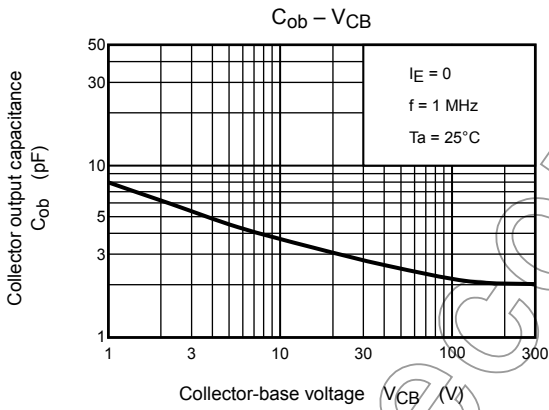
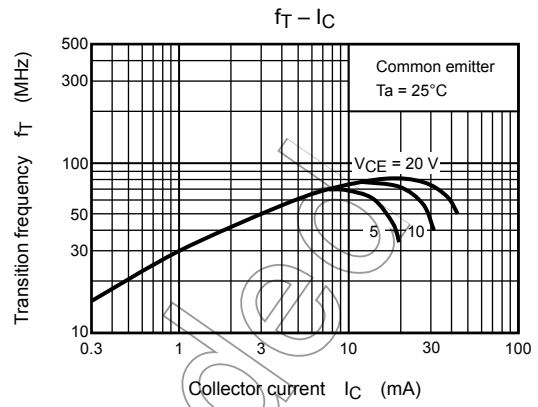
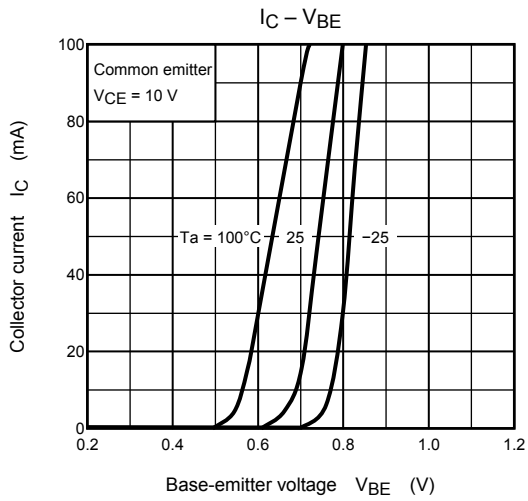
Marking



A line indicates lead (Pb)-free package or lead (Pb)-free finish.

Not Recommended for New Design





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