

TOSHIBA Transistor Silicon NPN Epitaxial Planar Type

## 2SC5720

MEDIUM POWER AMPLIFIER APPLICATIONS  
STORBO FLASH APPLICATIONS

Unit: mm

- Low Saturation Voltage:  $V_{CE(sat)}(1) = 0.25 \text{ V (max)}$   
( $I_C = 3 \text{ A}/I_B = 60 \text{ mA}$ )

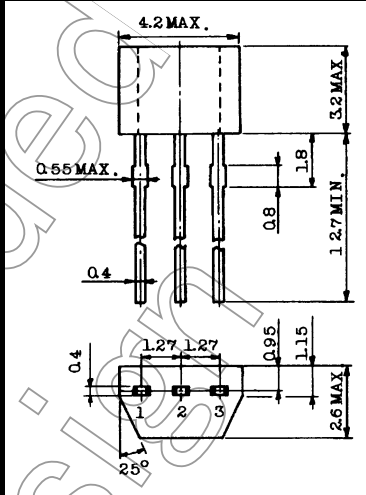
Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Characteristic	Symbol	Rating	Unit
Collector-Base voltage	$V_{CBO}$	15	V
Collector-Emitter voltage	$V_{CEO}$	10	V
Emitter-Base voltage	$V_{EBO}$	7	V
Collector current	DC	$I_C$	A
	Pulsed	$I_{CP}$	
Collector power dissipation	$P_C$ (Note 1)	550	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-55 to 150	$^\circ\text{C}$

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).

Note 1: When a device is mounted on a glass epoxy board  
(35 mm × 30 mm × 1mm)

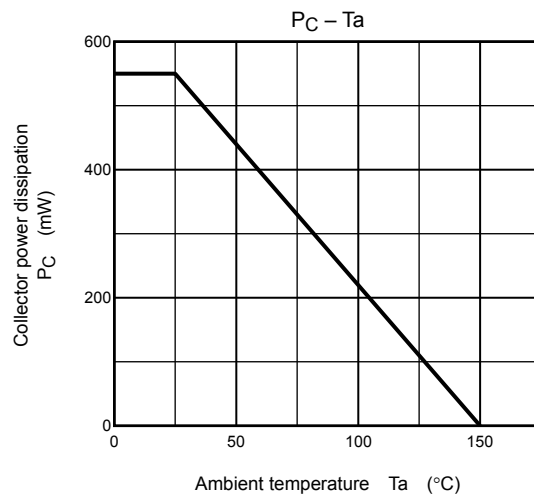
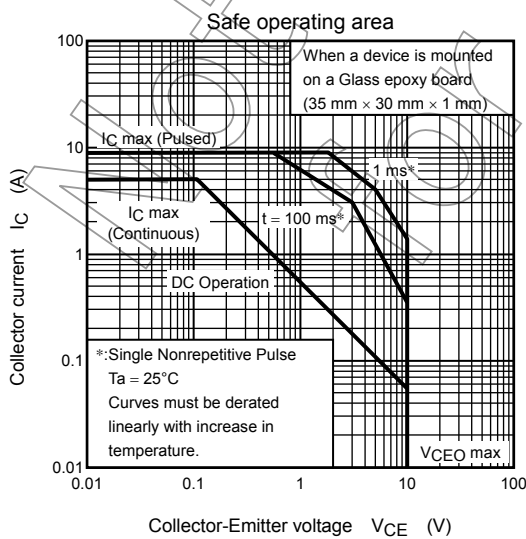
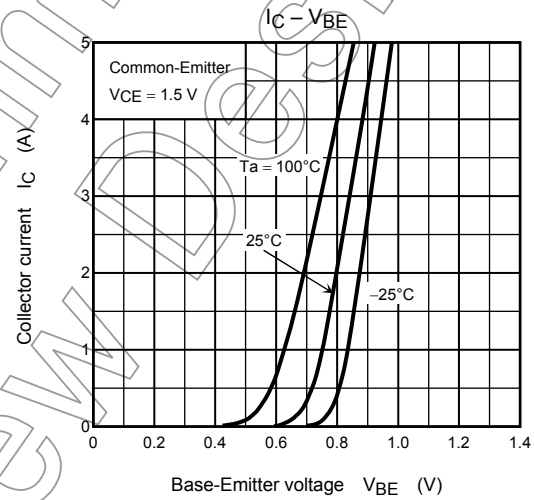
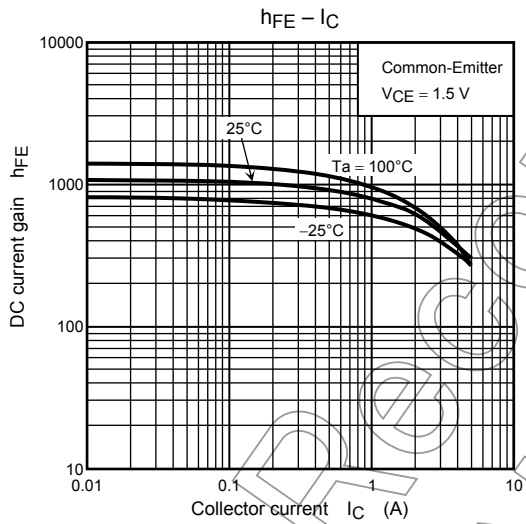
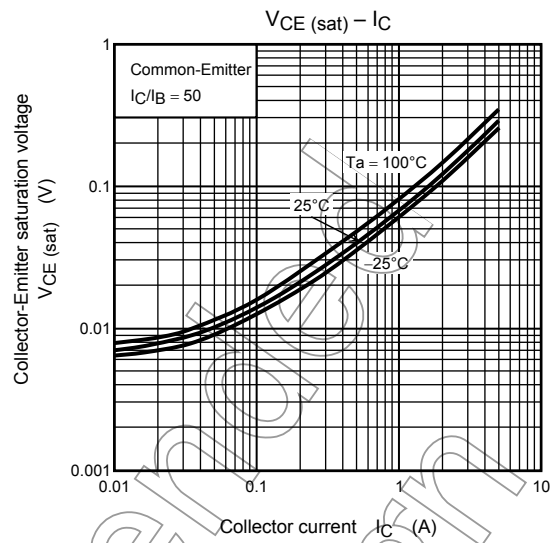
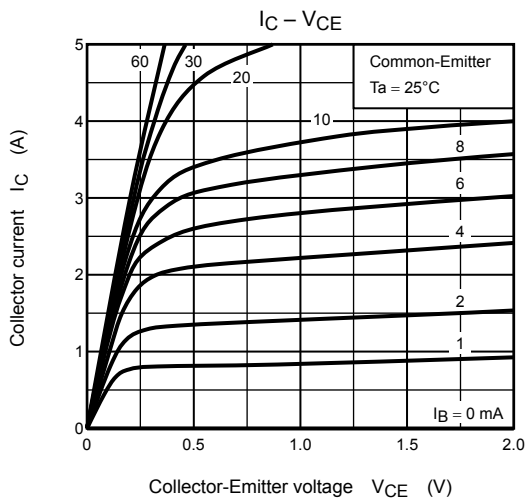
	
1. EMITTER	
2. COLLECTOR	
3. BASE	
JEDEC	—
JEITA	—
TOSHIBA	2-4E1A

Weight: 0.13 g (typ.)

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

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 15 \text{ V}, I_E = 0$	—	—	0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5 \text{ V}, I_C = 0$	—	—	0.1	$\mu\text{A}$
Collector-Emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1 \text{ mA}, I_B = 0$	10	—	—	V
DC current gain	$h_{FE(1)}$ (Note2)	$V_{CE} = 1.5 \text{ V}, I_C = 0.5 \text{ A}$	700	—	2000	
	$h_{FE(2)}$ (Note2)	$V_{CE} = 1.5 \text{ V}, I_C = 2 \text{ A}$	450	—	—	
	$h_{FE(3)}$ (Note2)	$V_{CE} = 1.5 \text{ V}, I_C = 5 \text{ A}$	240	—	—	
Collector-Emitter saturation voltage	$V_{CE(sat)}$ (Note2)	$I_C = 3 \text{ A}, I_B = 60 \text{ mA}$	—	—	0.25	V
Collector output capacitance	$C_{ob}$	$V_{CB} = 10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$	—	30	—	pF

Note 2: Pulse test



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