

TOSHIBA Transistor Silicon NPN Epitaxial Planar Type

**2SC5720**MEDIUM POWER AMPLIFIER APPLICATIONS  
STOROBO FLASH APPLICATIONS

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

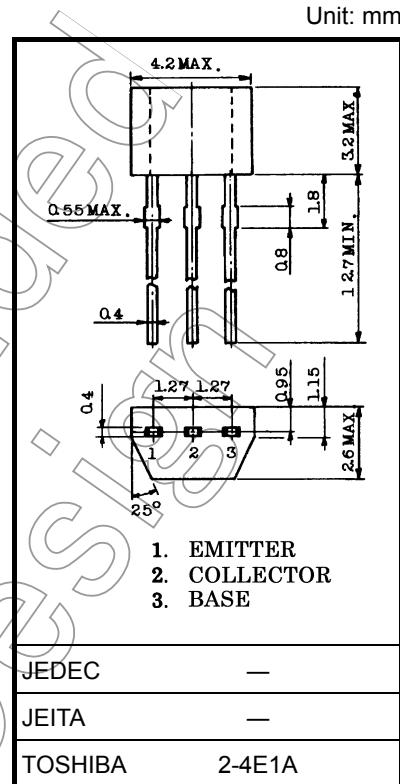
**Absolute Maximum Ratings (Ta = 25°C)**

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 $I_C$	5	A
	Pulsed $I_{CP}$	9	
Collector power dissipation	$P_C$ (Note 1)	550	mW
Junction temperature	$T_j$	150	°C
Storage temperature range	$T_{\text{stg}}$	-55 to 150	°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)

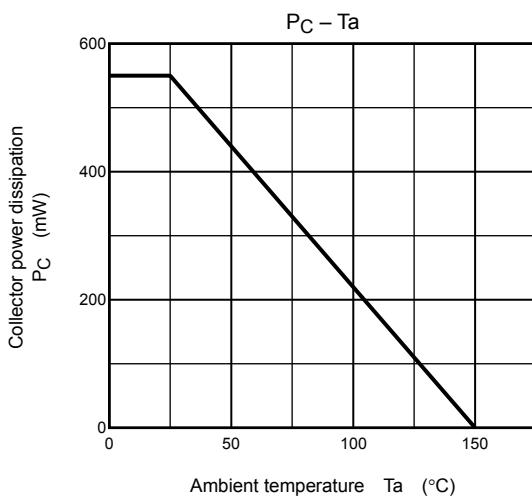
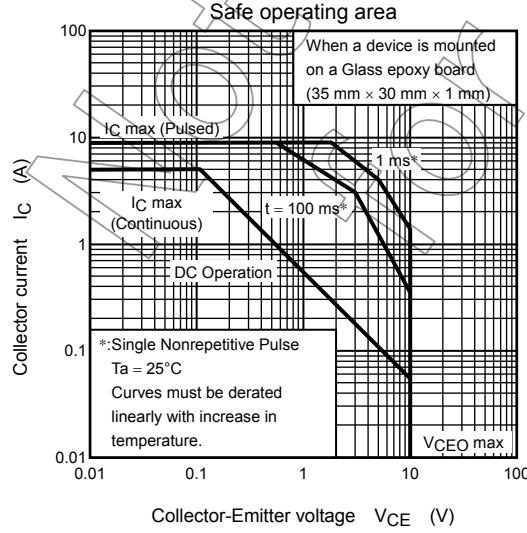
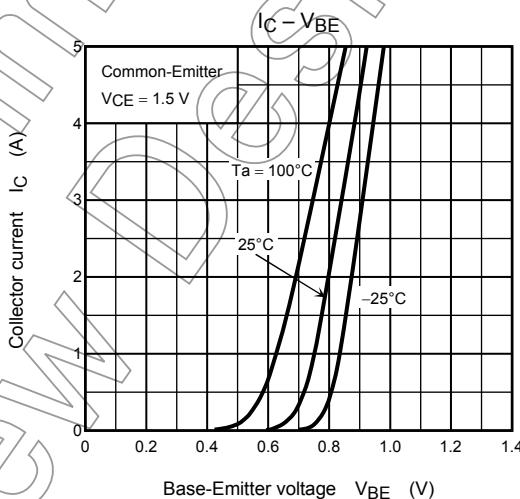
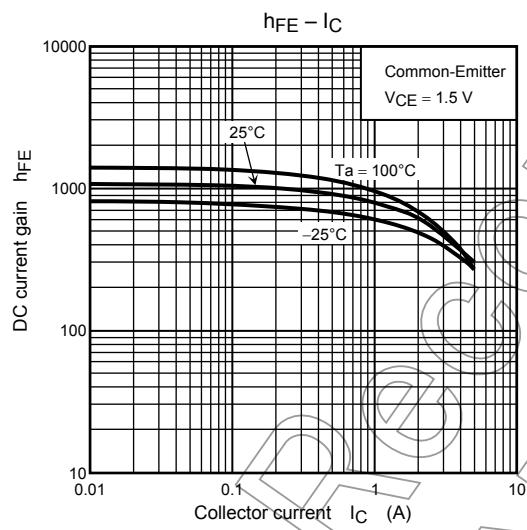
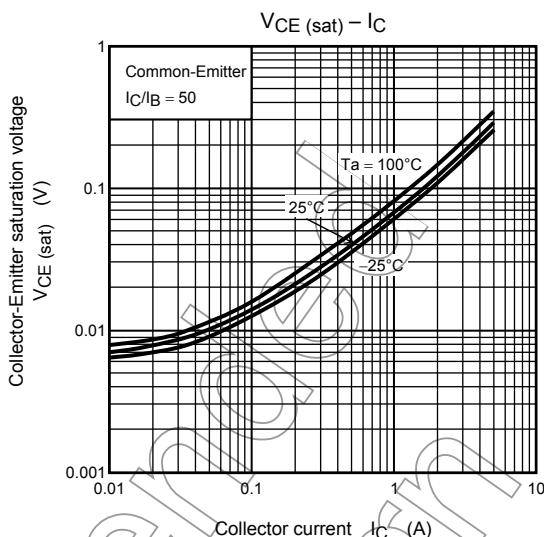
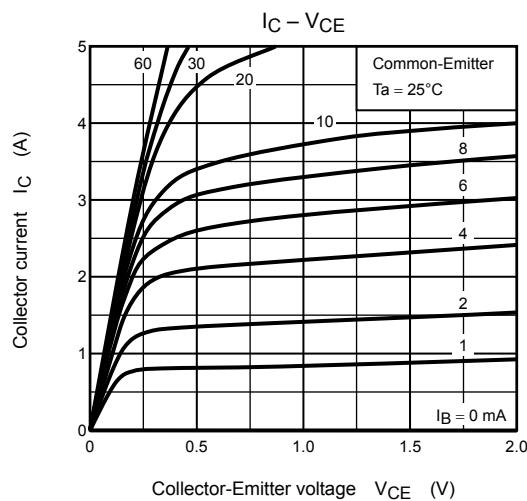


Weight: 0.13 g (typ.)

**Electrical Characteristics (Ta = 25°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	μA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5 \text{ V}, I_C = 0$	—	—	0.1	μA
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	$V_{CE}(\text{sat})$ (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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