

# 2SC4682

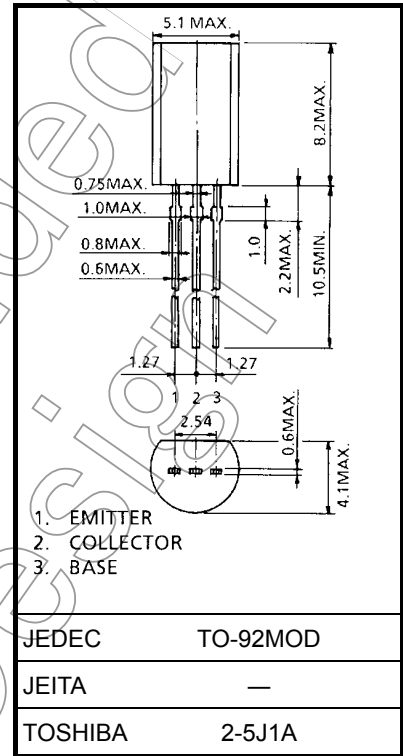
Strobe Flash Applications  
 Medium Power Amplifier Applications

Unit: mm

- Excellent  $h_{FE}$  linearity :  $h_{FE} (1) = 800$  to  $3200$  ( $V_{CE} = 1$  V,  $I_C = 0.5$  A)  
 :  $h_{FE} (2) = 500$  (typ.) ( $V_{CE} = 1$  V,  $I_C = 3$  A)
- Low saturation voltage :  $V_{CE} (sat) = 0.5$  V (max) ( $I_C = 3$  A,  $I_B = 30$  mA)

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

Characteristics		Symbol	Rating	Unit
Collector-base voltage		$V_{CBO}$	30	V
Collector-emitter voltage		$V_{CES}$	30	V
		$V (BR)_{CEO}$	15	
Emitter-base voltage		$V_{EBO}$	6	V
Collector current	DC	$I_C$	3	A
	Pulse	$I_{CP}$	6	
Base current		$I_B$	0.8	A
Collector power dissipation		$P_C$	900	mW
Junction temperature		$T_j$	150	$^\circ\text{C}$
Storage temperature range		$T_{stg}$	-55 to 150	$^\circ\text{C}$



Weight: 0.36 g (typ.)

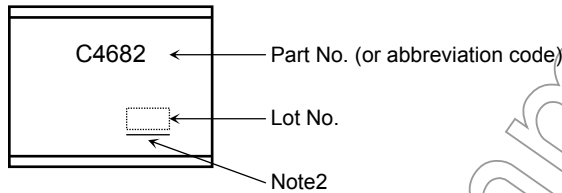
Note1: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) 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).

Not for

**Electrical Characteristics (Ta = 25°C)**

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB} = 30\text{ V}, I_E = 0$	—	—	1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 6\text{ V}, I_C = 0$	—	—	10	$\mu\text{A}$
Collector-emitter breakdown voltage	$V_{(BR) CEO}$	$I_C = 10\text{ mA}, I_B = 0$	15	—	—	V
DC current gain	$h_{FE (1)}$	$V_{CE} = 1\text{ V}, I_C = 0.5\text{ A}$	800	—	3200	
	$h_{FE (2)}$	$V_{CE} = 1\text{ V}, I_C = 3\text{ A}$	300	500	—	
Collector-emitter saturation voltage	$V_{CE (sat)}$	$I_C = 3\text{ A}, I_B = 30\text{ mA}$	—	0.25	0.5	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = 1\text{ V}, I_C = 3\text{ A}$	—	0.85	1.2	V
Transition frequency	$f_T$	$V_{CE} = 1\text{ V}, I_C = 0.5\text{ A}$	—	150	—	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{ V}, I_E = 0, f = 1\text{ MHz}$	—	30	—	pF

**Marking**

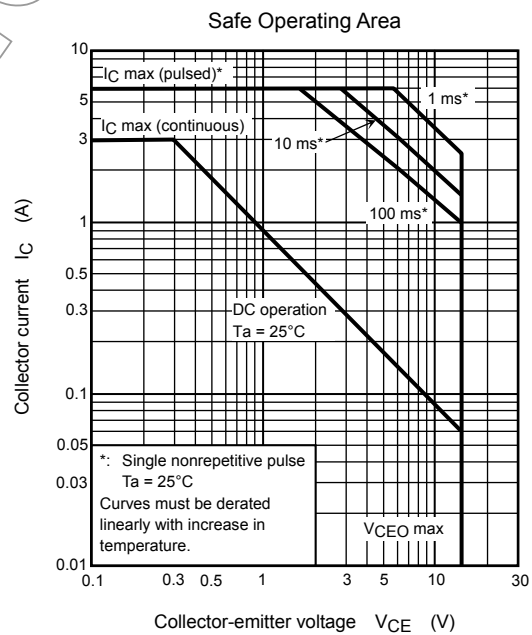
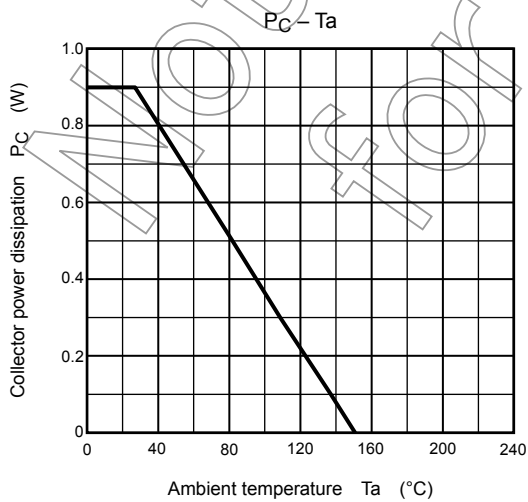
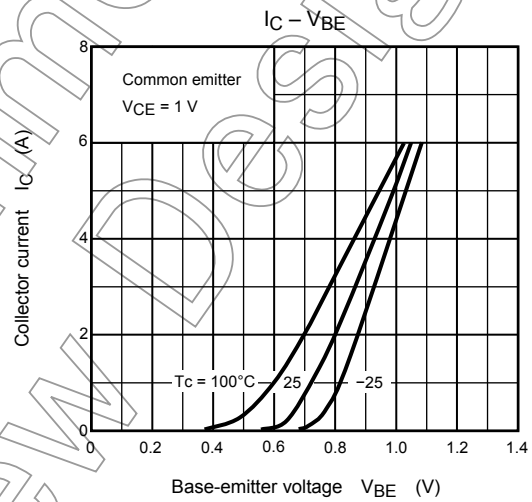
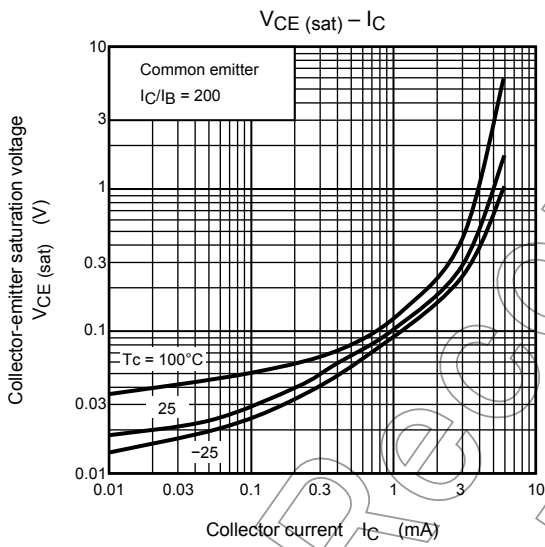
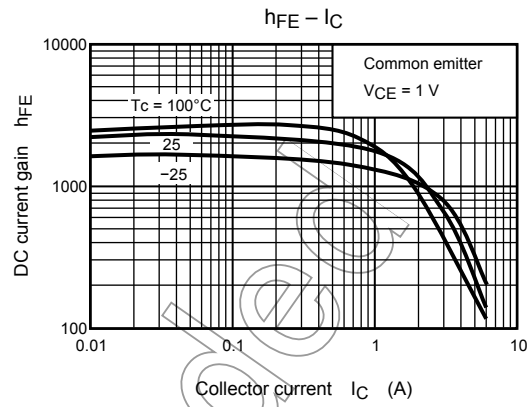
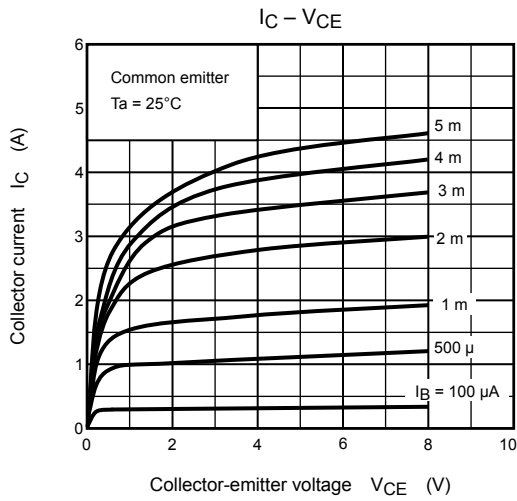


Note2: A line under a Lot No. identifies the indication of product Labels.

Not underlined:  $[[Pb]]/INCLUDES > MCV$

Underlined:  $[[G]]/RoHS COMPATIBLE$  or  $[[G]]/RoHS [[Pb]]$

Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product. The RoHS is the Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.



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