TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

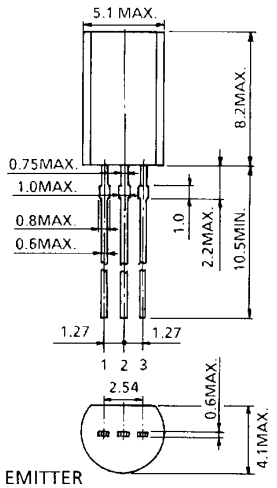
2SC4682

Strobe Flash Applications

Medium Power Amplifier Applications

- 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)

Unit: mm



JEDEC	TO-92MOD
JEITA	—
TOSHIBA	2-5J1A

Weight: 0.36 g (typ.)

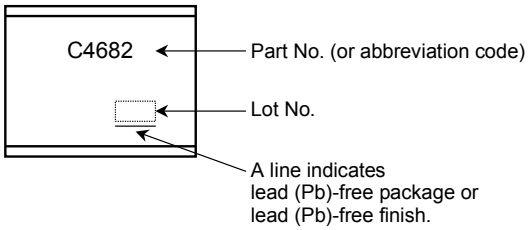
Maximum Ratings (Ta = 25°C)

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	°C
Storage temperature range		T_{stg}	−55 to 150	°C

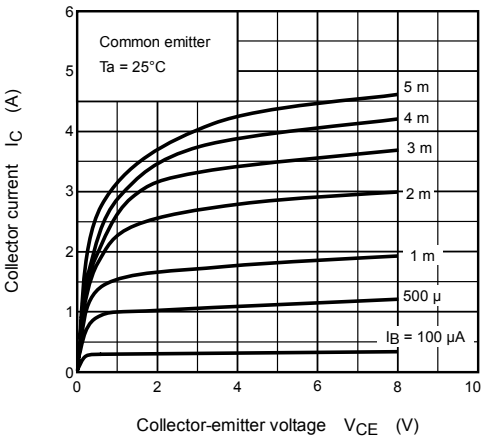
Electrical Characteristics (Ta = 25°C)

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

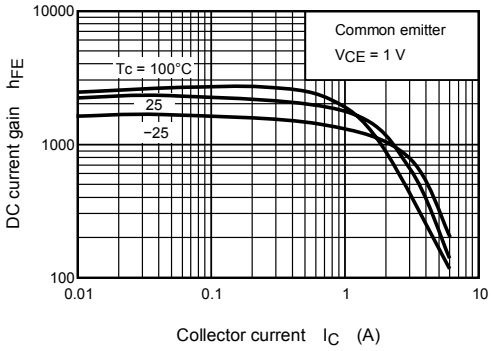
Marking


C4682
Part No. (or abbreviation code)
Lot No.
A line indicates
lead (Pb)-free package or
lead (Pb)-free finish.

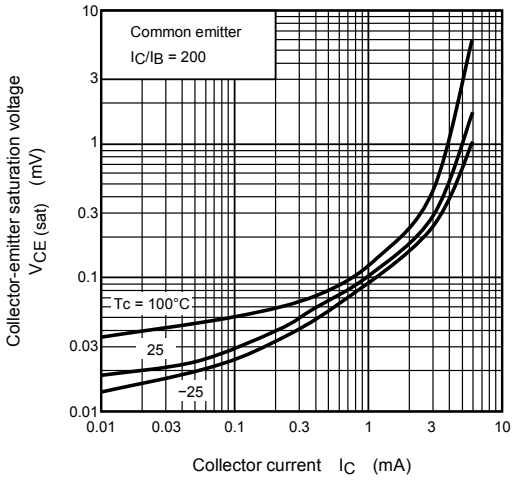
$I_C - V_{CE}$



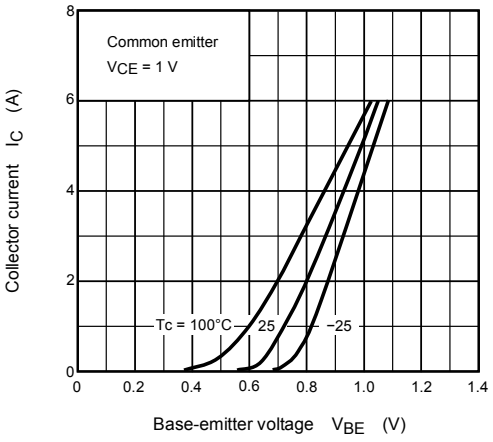
$h_{FE} - I_C$



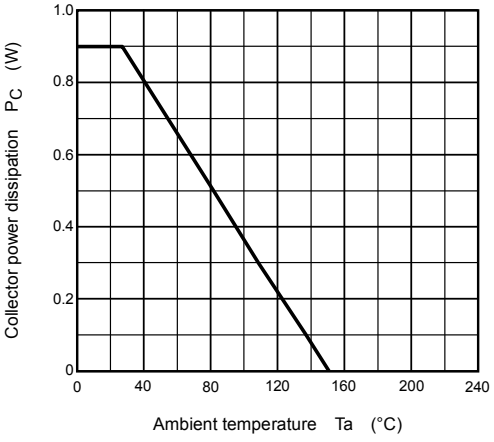
$V_{CE\ (sat)} - I_C$



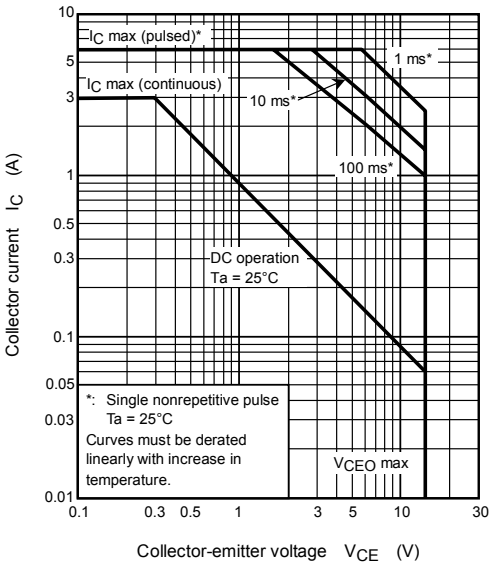
$I_C - V_{BE}$



$P_C - Ta$



Safe Operating Area



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