

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT Process)

2SC4682

Strobe Flash Applications

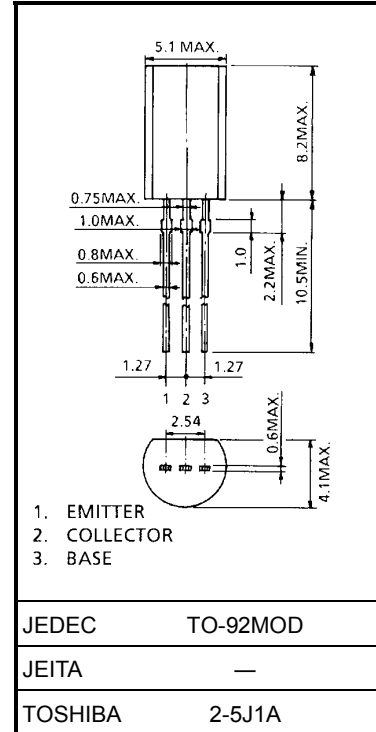
Medium Power Amplifier Applications

Unit: mm

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

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	$^\circ\text{C}$

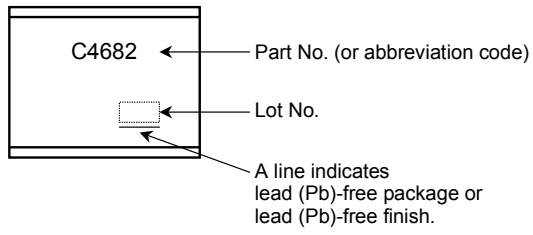


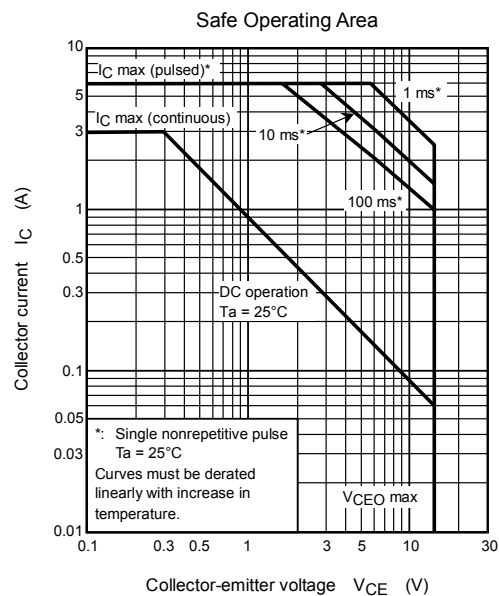
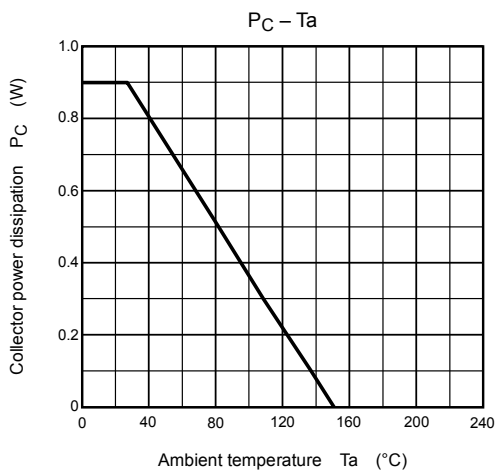
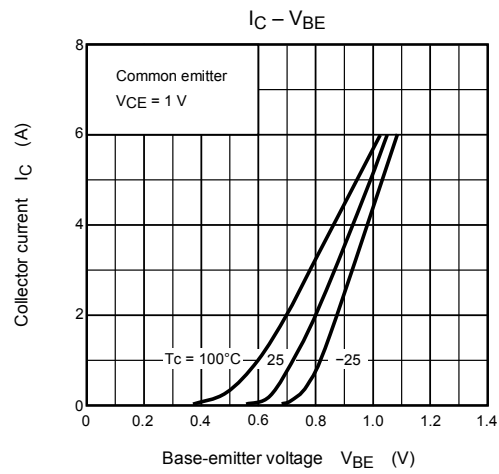
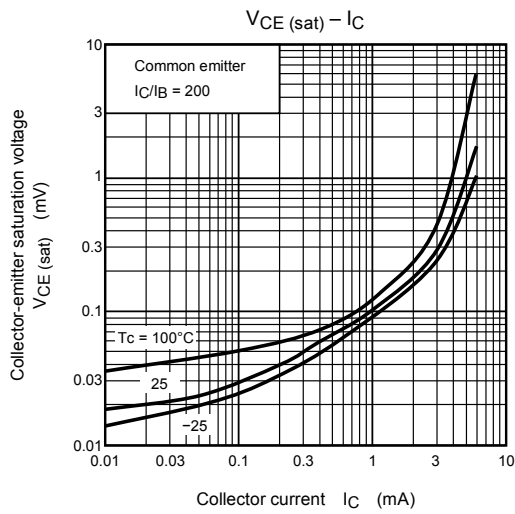
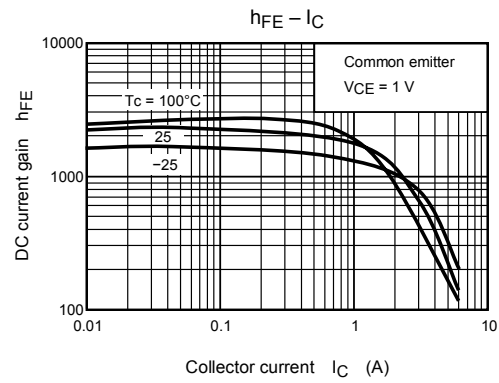
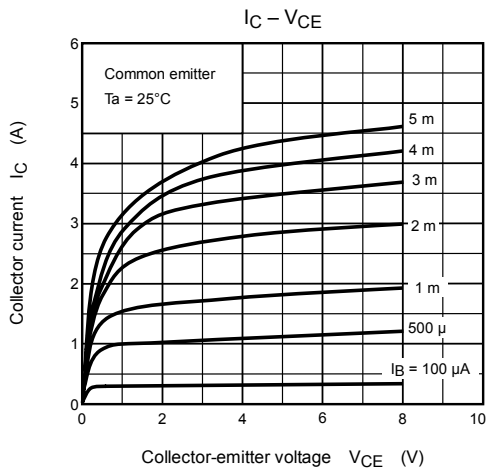
Weight: 0.36 g (typ.)

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

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 30\text{ V}, I_E = 0$	—	—	1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 6\text{ V}, I_C = 0$	—	—	10	μA
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





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