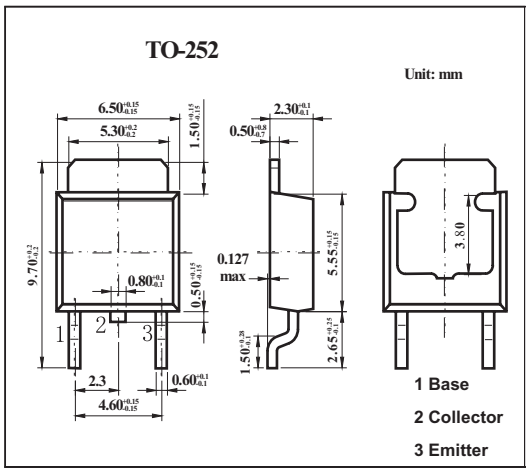
TY Semicondutor®

Product specification

2SC4684



■ Features

- High DC current gain.
- Low collector saturation voltage.
- High power dissipation.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	20	V
	V_{CES}	40	V
Emitter-base voltage	V_{EBO}	8	V
Collector current	I_C	5	A
Collector current pulse *	I_{CP}	8	A
Base current	I_B	0.5	A
Collector power dissipation T_a = 25℃	P_C	1.0	W
T_c = 25℃		10	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* Pulse test: Pulse width = 10 ms (max), duty cycle = 30% (max)

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cut-off current	I_{CBO}	V_{CB} = 50 V, I_E = 0			100	nA
Emitter cut-off current	I_{EBO}	V_{EB} = 8 V, I_C = 0			100	nA
Collector-emitter breakdown voltage	V_{CEO}	I_C = 10 mA, I_B = 0	20			V
DC current gain	h_{FE}	V_{CE} = 2 V, I_C = 0.5 A	800		3200	
		V_{CE} = 2 V, I_C = 4 A	250			
Collector-emitter saturation voltage	$V_{CE\ (sat)}$	I_C = 4 A, I_B = 40 mA			0.5	V
Base-emitter voltage	V_{BE}	V_{CE} = 2 V, I_C = 4 A			1.2	V
Transition frequency	f_T	V_{CE} = 2 V, I_C = 0.5 A		150		MHz
Collector output capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz		45		pF

■ Marking

Marking	C4684