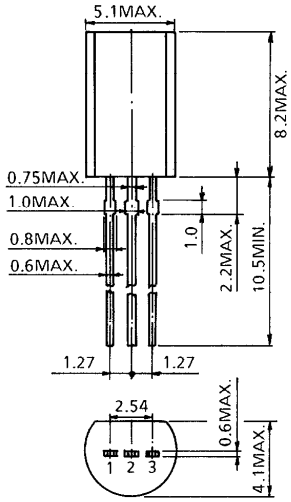
TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC4682

STROBE FLASH APPLICATIONS

MEDIUM POWER AMPLIFIER APPLICATIONS

Unit in mm



1. EMITTER
2. COLLECTOR
3. BASE

JEDEC	TO-92MOD
EIAJ	—
TOSHIBA	2-5J1A

Weight : 0.36 g

- Excellent h_{FE} Linearity
  : $h_{FE\,(1)}$ = 800~3200 (V_{CE} = 1 V, I_C = 0.5 A)
  : $h_{FE\,(2)}$ = 500 (Typ.) (V_{CE} = 1 V, I_C = 3 A)
- Low Collector Saturation Voltage
  : $V_{CE\,(sat)}$ = 0.5V (Max.) (I_C = 3 A, I_B = 30 mA)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CBO}	30	V
Collector-Emitter Voltage		V_{CES}	30	V
		V_{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}	−55~150	°C

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	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

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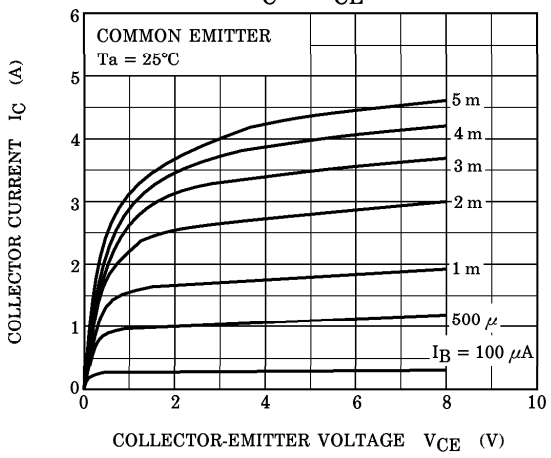
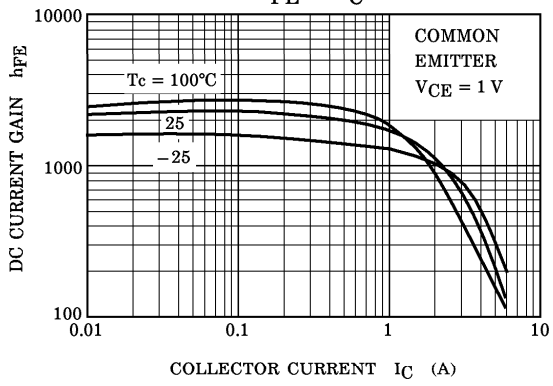
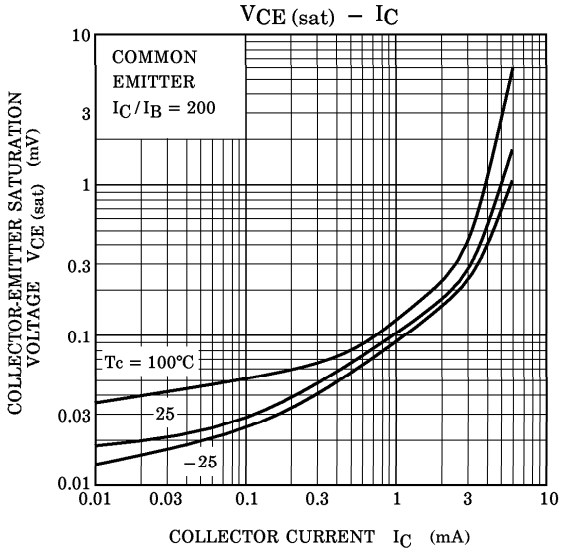
$I_C - V_{CE}$



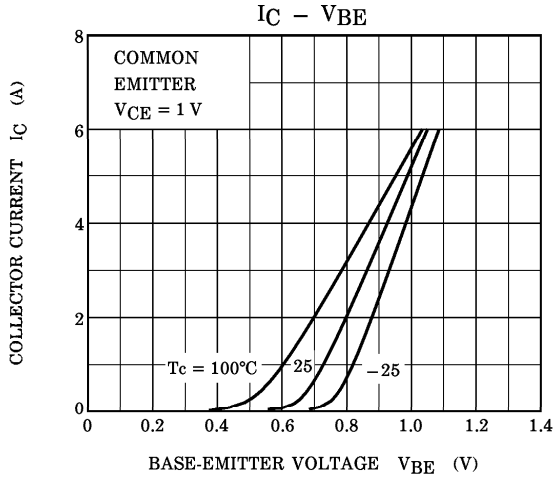
$h_{FE} - I_C$



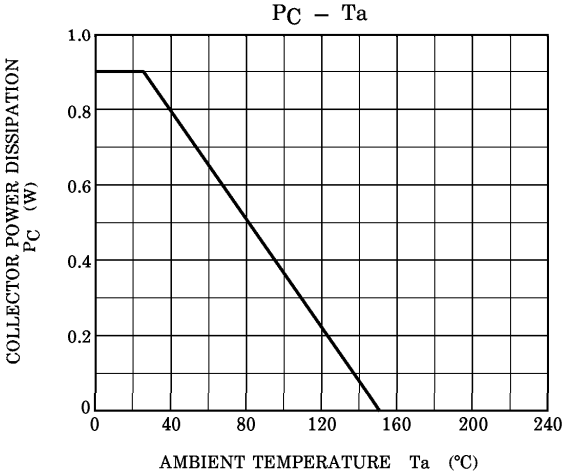
$V_{CE\,(sat)} - I_C$



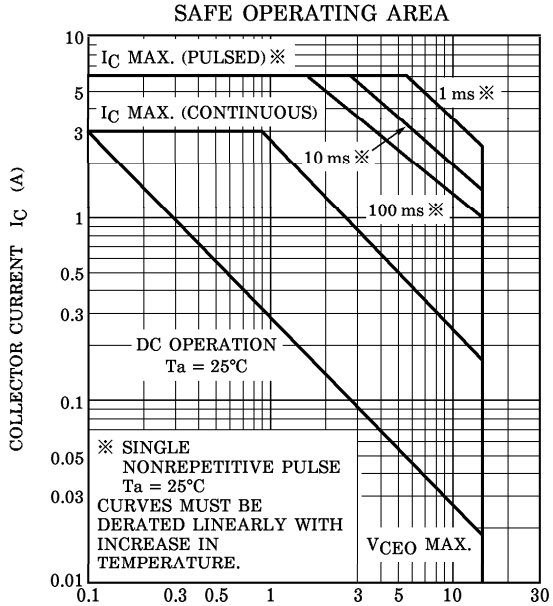
$I_C - V_{BE}$



$P_C - Ta$



SAFE OPERATING AREA



$I_C - V_{BE}$