

TOSHIBA Transistor Silicon NPN Epitaxial Type (PCT process)

2SC3279

Strobe Flash Applications

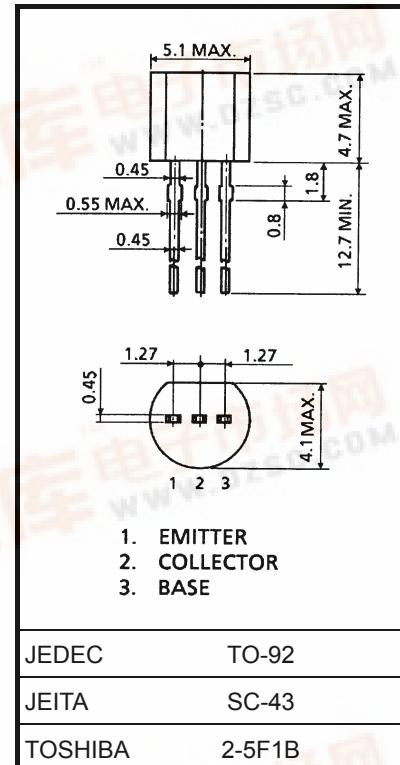
Medium Power Amplifier Applications

Unit: mm

- High DC current gain and excellent h_{FE} linearity
: h_{FE} (1) = 140~600 (V_{CE} = 1 V, I_C = 0.5 A)
: h_{FE} (2) = 70 (min), 200 (typ.) (V_{CE} = 1 V, I_C = 2 A)
- Low saturation voltage: V_{CE} (sat) = 0.5 V (max)
(I_C = 2 A, I_B = 50 mA)

Absolute Maximum Ratings (T_a = 25°C)

Characteristics	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CES}	30	V
	V_{CEO}	10	
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	2	A
	I_{CP}	5	
Base current	I_B	0.2	A
Collector power dissipation	P_C	750	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55~150	°C



Weight: 0.21 g (typ.)

Note: 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.

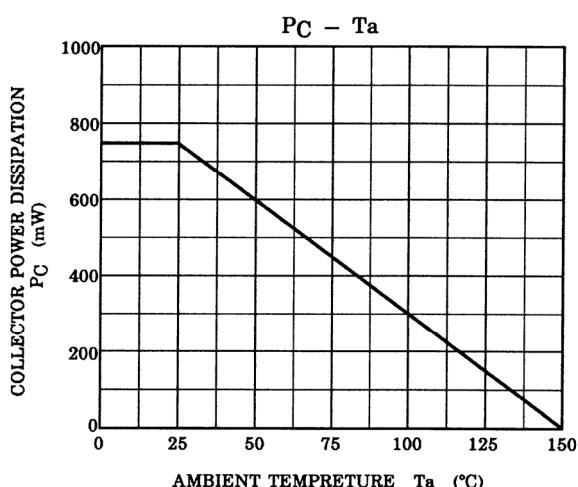
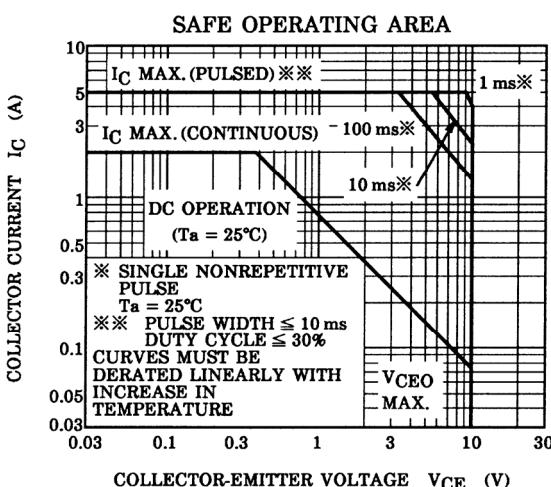
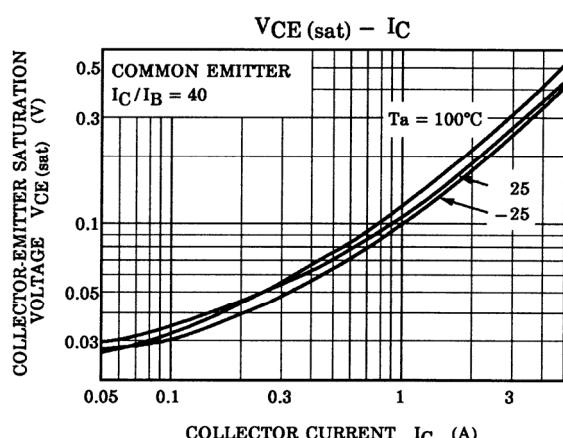
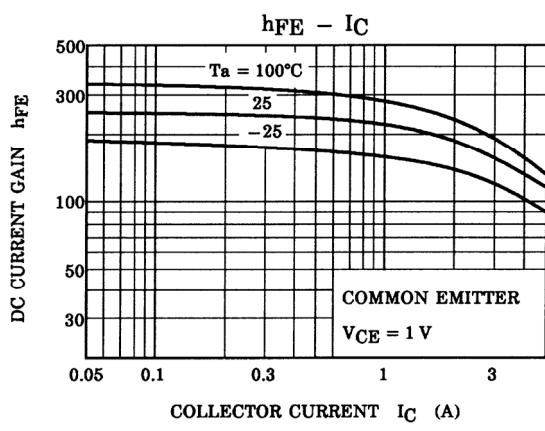
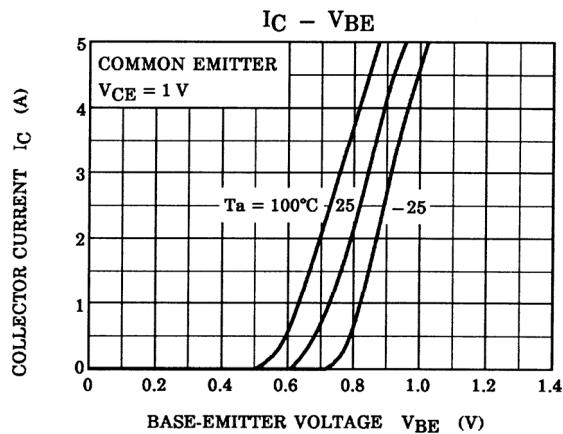
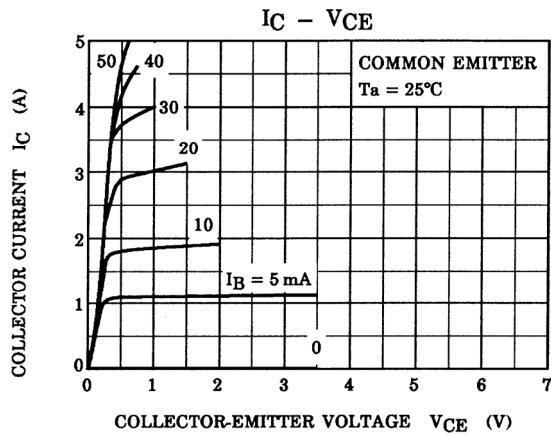
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc.).

Note 1: Pulse width = 10 ms (max), duty cycle = 30% (max)

Electrical Characteristics (T_a = 25°C)

Characteristics	Symbol	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	$V_{CB} = 30$ V, $I_E = 0$	—	—	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 6$ V, $I_C = 0$	—	—	0.1	μA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10$ mA, $I_B = 0$	10	—	—	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 1$ mA, $I_C = 0$	6	—	—	V
DC current gain	h_{FE} (1) (Note 2)	$V_{CE} = 1$ V, $I_C = 0.5$ A	140	—	600	
	h_{FE} (2)	$V_{CE} = 1$ V, $I_C = 2$ A	70	200	—	
Collector-emitter saturation voltage	V_{CE} (sat)	$I_C = 2$ A, $I_B = 50$ mA	—	0.2	0.5	V
Base-emitter voltage	V_{BE}	$V_{CE} = 1$ V, $I_C = 2$ A	—	0.86	1.5	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	—	27	—	pF

Note 2: h_{FE} (1) classification L: 140~240, M: 200~330, N: 300~450, P: 420~600



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20070701-EN GENERAL

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