

TOSHIBA TRANSISTOR SILICON PNP EPITAXIAL TYPE (DARLINGTON POWER TRANSISTOR)

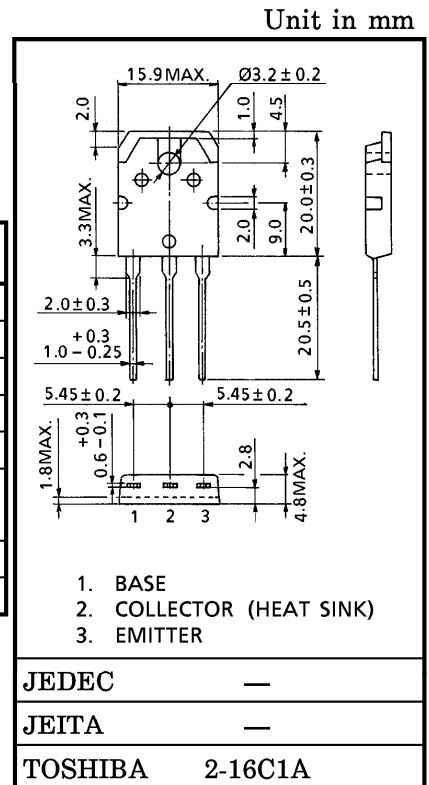
2SB1557

POWER AMPLIFIER APPLICATIONS

- High Breakdown Voltage : $V_{CEO} = -140$ V (Min.)
- Complementary to 2SD2386

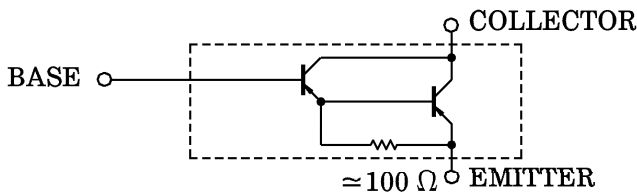
MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	V_{CBO}	-140	V
Collector-Emitter Voltage	V_{CEO}	-140	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-7	A
Base Current	I_B	-0.1	A
Collector Power Dissipation ($T_c = 25^\circ\text{C}$)	P_C	70	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55~150	$^\circ\text{C}$



Weight : 4.7 g (Typ.)

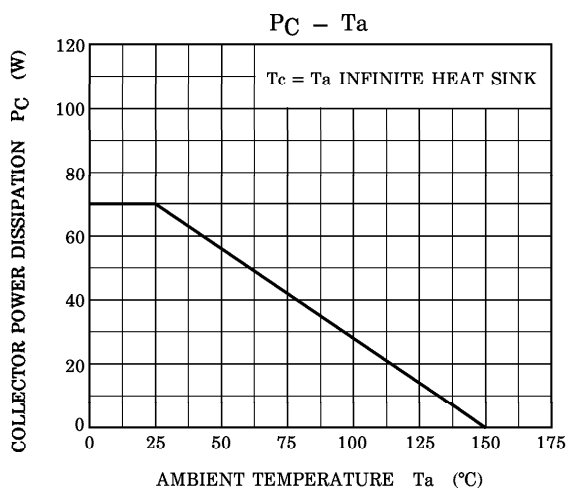
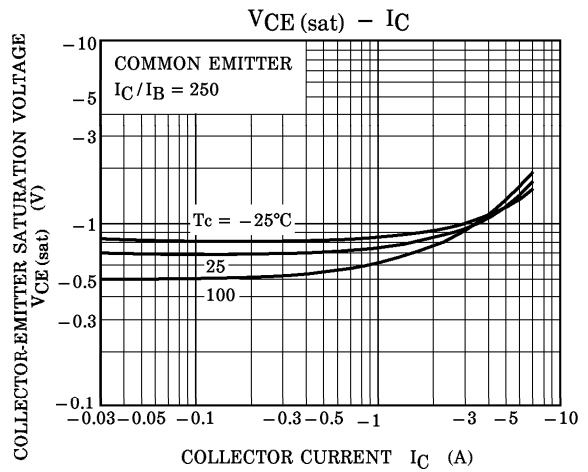
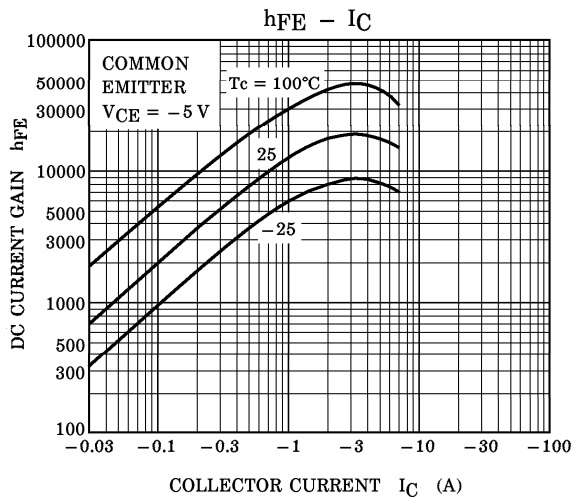
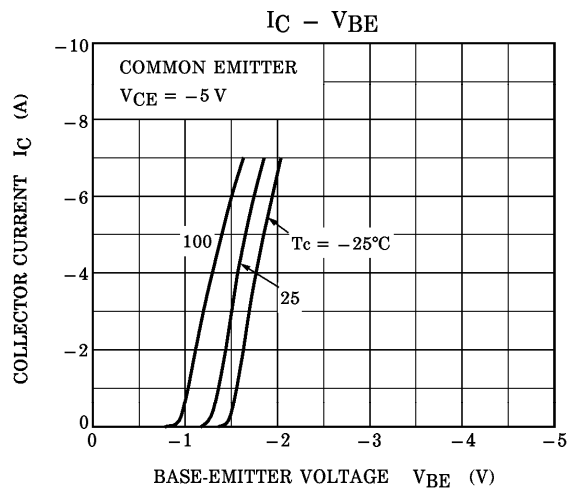
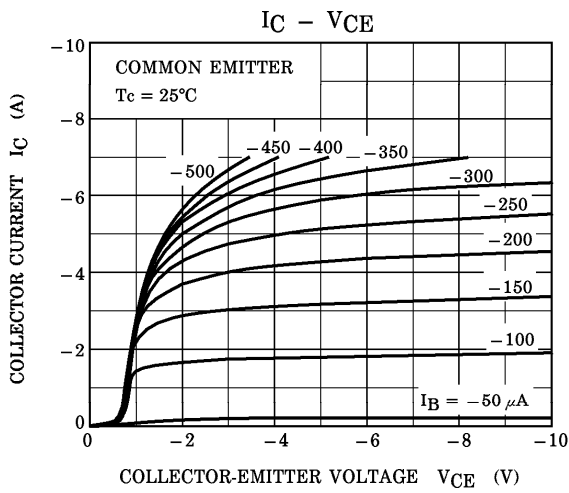
EQUIVALENT CIRCUIT

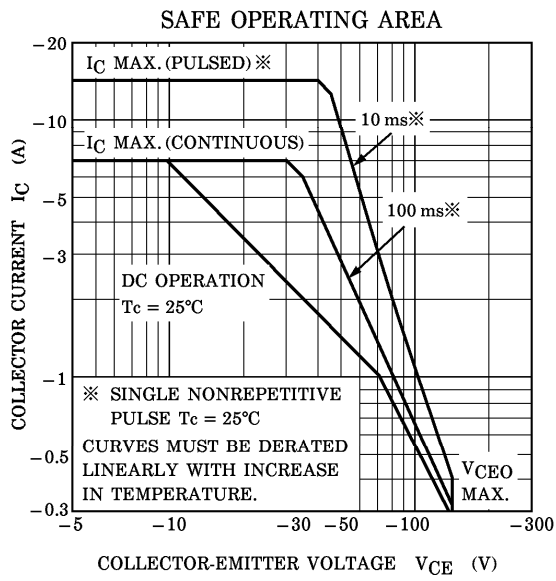


ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = -140$ V, $I_E = 0$	—	—	-5.0	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = -5$ V, $I_C = 0$	—	—	-5.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -50$ mA, $I_B = 0$	-140	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE} = -5$ V, $I_C = -6$ A	5000	—	30000	
	$h_{FE(2)}$	$V_{CE} = -5$ V, $I_C = -10$ A	2000	—	—	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -6$ A, $I_B = -6$ mA	—	—	-2.5	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = -5$ V, $I_C = -6$ A	—	—	-3.0	V
Transition Frequency	f_T	$V_{CE} = -5$ V, $I_C = -1$ A	—	30	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = -10$ V, $I_E = 0$, $f = 1$ MHz	—	120	—	pF

(Note) : $h_{FE(1)}$ Classification A : 5000~12000, B : 9000~18000, C : 15000~30000





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