

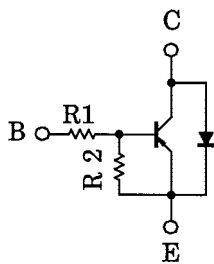
TENTATIVE TOSHIBA Transistor Silicon PNP Epitaxial Type (PCT Process)

RN2357

Driver Circuit, Inverter Circuit, and Switching Applications

- With built-in bias resistors
- Simplify circuit design
- Reduce a quantity of parts and manufacturing process
- RN2307 and a diode are included in a SC-70 package.

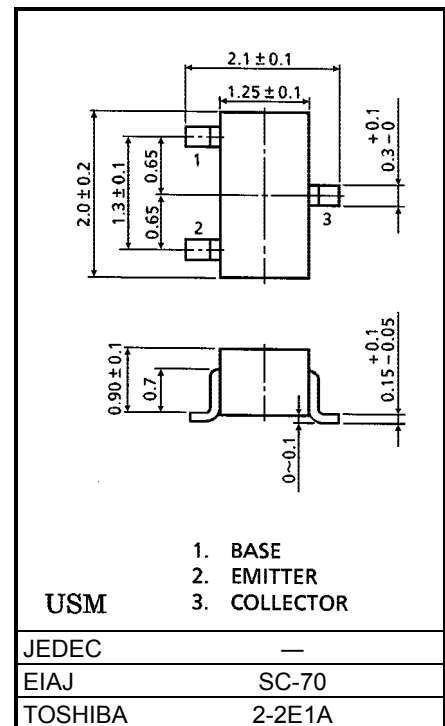
Equivalent Circuit (Top View)



Bias Resistor Values

R1 (kΩ)	R2 (kΩ)
10	47

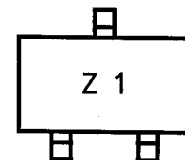
Unit: mm



Maximum Ratings (Ta = 25°C)

Characterisitic	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	-50	V
Collector-emitter voltage	V _{CEO}	-50	V
Emitter-base voltage	V _{EBO}	-6	V
Collector current	I _C	-100	mA
Collector power dissipation	P _C	100	mW
Junction temperature	T _j	150	°C
Storage temperature range	T _{stg}	-55~150	°C

Marking



Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Collector cut-off current	I_{CBO}	—	$V_{CB} = -50V, I_E = 0$	—	—	-0.1	μA
Emitter cut-off current	I_{EBO}	—	$V_{EB} = -6V, I_C = 0$	—	—	-0.2	mA
DC current gain	h_{FE}	—	$V_{CE} = -5V, I_C = -10mA$	80	—	—	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	$I_C = -5mA, I_B = -0.25mA$	—	-0.1	-0.3	V
Input voltage (ON)	$V_{I(ON)}$	—	$V_{CE} = -0.2V, I_C = -5mA$	-0.7	—	-1.8	V
Input voltage (OFF)	$V_{I(OFF)}$	—	$V_{CE} = -5V, I_C = -0.1mA$	-0.5	—	-1.0	V
Transition Frequency	f_T	—	$V_{CE} = -10V, I_C = -5mA$	—	200	—	MHz
Collector output capacitance	C_{ob}	—	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	3.5	—	pF
Input resistor	R1	—	—	7	10	13	k Ω
Resistor ratio	R1/R2	—	—	0.17	0.21	0.25	—
Forward voltage (damper diode)	V_F	—	$I_F = 100mA$	—	0.98	1.20	V

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