

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

2SC2983

POWER AMPLIFIER APPLICATIONS

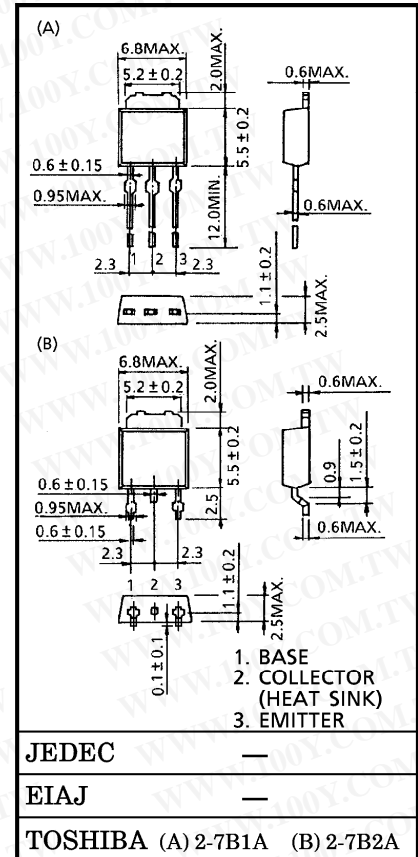
DRIVER STAGE AMPLIFIER APPLICATIONS

- High Transition Frequency : $f_T = 100$ MHz (Typ.)
- Complementary to 2SA1225

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

CHARACTERISTIC		SYMBOL	RATING	UNIT
Collector-Base Voltage		V_{CB0}	160	V
Collector-Emitter Voltage		V_{CEO}	160	V
Emitter-Base Voltage		V_{EBO}	5	V
Collector Current		I_C	1.5	A
Base Current		I_B	0.3	A
Collector Power Dissipation	$T_a = 25^\circ\text{C}$	P_C	1.0	W
	$T_c = 25^\circ\text{C}$		15	
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature Range		T_{stg}	-55~150	$^\circ\text{C}$

Unit in mm



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

Weight : 0.36 g

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	I_{CBO}	$V_{CB} = 160$ V, $I_E = 0$	—	—	1.0	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 5$ V, $I_C = 0$	—	—	1.0	μA
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = 10$ mA, $I_B = 0$	160	—	—	V
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = 1$ mA, $I_C = 0$	5	—	—	V
DC Current Gain	h_{FE} (Note)	$V_{CE} = 5$ V, $I_C = 100$ mA	70	—	240	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = 500$ mA, $I_B = 50$ mA	—	—	1.5	V
Base-Emitter Voltage	V_{BE}	$V_{CE} = 5$ V, $I_C = 500$ mA	—	—	1.0	V
Transition Frequency	f_T	$V_{CE} = 10$ V, $I_C = 100$ mA	—	100	—	MHz
Collector Output Capacitance	C_{ob}	$V_{CB} = 10$ V, $I_E = 0$, $f = 1$ MHz	—	25	—	pF

Note : h_{FE} Classification O : 70~140, Y : 120~240

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