

TOSHIBA TRANSISTOR SILICON PNP TRIPLE DIFFUSED TYPE

# 2SA1987

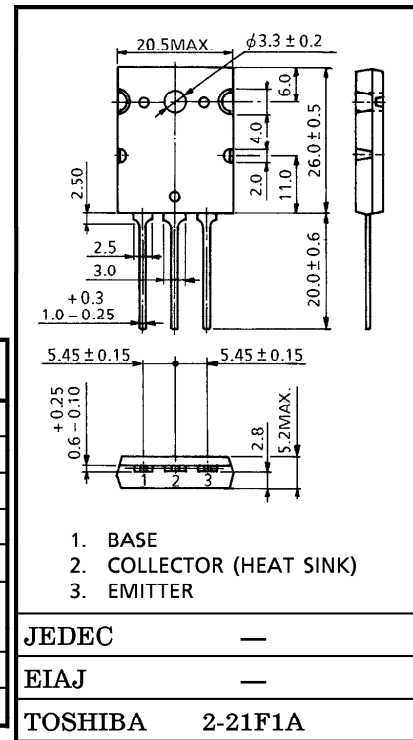
POWER AMPLIFIER APPLICATIONS

Unit in mm

- High Collector Voltage :  $V_{CEO} = -230V$  (Min.)
- Complementary to 2SC5359
- Recommend for 100W High Fidelity Audio Frequency Amplifier Output Stage.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Base Voltage	$V_{CBO}$	-230	V
Collector-Emitter Voltage	$V_{CEO}$	-230	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-15	A
Base Current	$I_B$	-1.5	A
Collector Power Dissipation ( $T_c = 25^\circ C$ )	$P_C$	180	W
Junction Temperature	$T_j$	150	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~150	$^\circ C$



Weight : 9.75g (Typ.)

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Collector Cut-off Current	$I_{CBO}$	$V_{CB} = -230V, I_E = 0$	—	—	-5.0	$\mu A$
Emitter Cut-off Current	$I_{EBO}$	$V_{EB} = -5V, I_C = 0$	—	—	-5.0	$\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR) CEO}$	$I_C = -50mA, I_B = 0$	-230	—	—	V
DC Current Gain	$h_{FE(1)}$ (Note)	$V_{CE} = -5V, I_C = -1A$	55	—	160	—
	$h_{FE(2)}$	$V_{CE} = -5V, I_C = -7A$	35	70	—	—
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -8A, I_B = -0.8A$	—	-1.5	-3.0	V
Base-Emitter Voltage	$V_{BE}$	$V_{CE} = -5V, I_C = -7A$	—	-1.0	-1.5	V
Transition Frequency	$f_T$	$V_{CE} = -5V, I_C = -1A$	—	30	—	MHz
Collector Output Capacitance	$C_{ob}$	$V_{CB} = -10V, I_E = 0, f = 1MHz$	—	360	—	pF

(Note)  $h_{FE(1)}$  Classification R : 55~110, O : 80~160

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