



DC COMPONENTS CO., LTD.

DISCRETE SEMICONDUCTORS

2SB857

TECHNICAL SPECIFICATIONS OF PNP EPITAXIAL PLANAR TRANSISTOR

Description

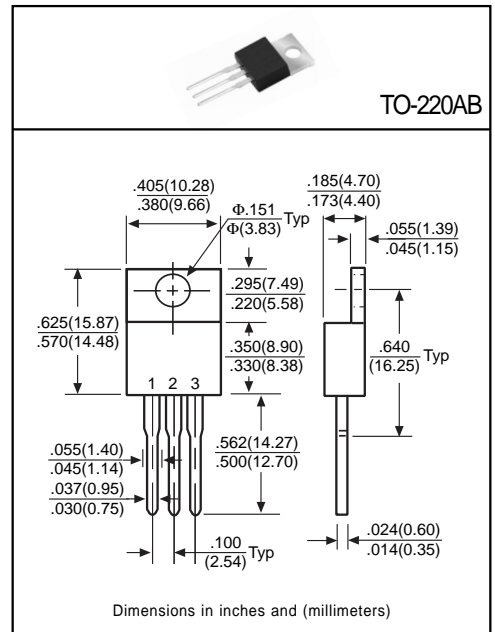
Designed for low frequency power amplifier.

Pinning

- 1 = Base
- 2 = Collector
- 3 = Emitter

Absolute Maximum Ratings( $T_A=25^{\circ}\text{C}$ )

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	$V_{CB0}$	-70	V
Collector-Emitter Voltage	$V_{CE0}$	-50	V
Emitter-Base Voltage	$V_{EB0}$	-5	V
Collector Current (continuous)	$I_C$	-4	A
Collector Current (peak)	$I_C$	-8	A
Total Power Dissipation( $T_C=25^{\circ}\text{C}$ )	$P_D$	40	W
Junction Temperature	$T_J$	+150	$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55 to +150	$^{\circ}\text{C}$



Electrical Characteristics

(Ratings at  $25^{\circ}\text{C}$  ambient temperature unless otherwise specified)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	$BV_{CB0}$	-70	-	-	V	$I_C=-10\mu\text{A}$ , $I_E=0$
Collector-Emitter Breakdown Voltage	$BV_{CE0}$	-50	-	-	V	$I_C=-50\text{mA}$ , $I_B=0$
Emitter-Base Breakdown Voltage	$BV_{EB0}$	-5	-	-	V	$I_E=-10\mu\text{A}$ , $I_C=0$
Collector Cutoff Current	$I_{CBO}$	-	-	-1	$\mu\text{A}$	$V_{CB}=-50\text{V}$ , $I_E=0$
Collector-Emitter Saturation Voltage <sup>(1)</sup>	$V_{CE(sat)}$	-	-	-1	V	$I_C=-2\text{A}$ , $I_B=-0.2\text{A}$
Base-Emitter On Voltage <sup>(1)</sup>	$V_{BE(on)}$	-	-	-1	V	$I_C=-1\text{A}$ , $V_{CE}=-4\text{V}$
DC Current Gain <sup>(1)</sup>	$h_{FE1}$	35	-	-	-	$I_C=-0.1\text{A}$ , $V_{CE}=-4\text{V}$
	$h_{FE2}$	60	-	320	-	$I_C=-1\text{A}$ , $V_{CE}=-4\text{V}$
Transition Frequency	$f_T$	-	15	-	MHz	$I_C=-500\text{mA}$ , $V_{CE}=-4\text{V}$ , $f=100\text{MHz}$

(1) Pulse Test: Pulse Width  $\leq 380\mu\text{s}$ , Duty Cycle  $\leq 2\%$

Classification of  $h_{FE2}$

Rank	B	C	D
Range	60~120	100~200	160~320