Ordering number:EN3686A

PNPTriple Diffused Planar Silicon Transistors

2SA1831

High-Voltage Amplifier, High-Voltage Switching Applications

Features

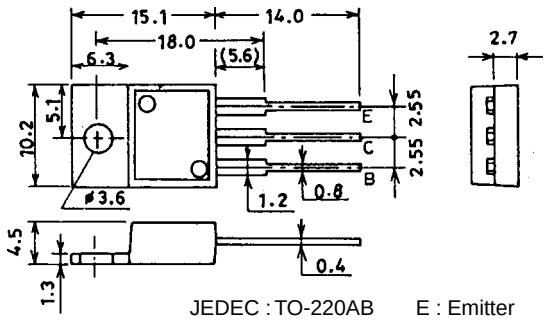
- High breakdown voltage (V_{CEO} min=–800V).
- Small C_{ob} (C_{ob} typ=1.6pF).
- High reliabirity (Adoption of HVP processes).

Package Dimensions

unit:mm

2010B

[2SA1831]



JEDEC : TO-220AB
EIAJ : SC-46

E : Emitter
C : Collector
B : Base

Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		–800	V
Collector-to-Emitter Voltage	V_{CEO}		–800	V
Emitter-to-Base Voltage	V_{EBO}		–7	V
Collector Current	I_C		–20	mA
Collector Current (Pulse)	I_{CP}		–60	mA
Collector Dissipation	P_C		1.75	W
Junction Temperature	Tj		150	˚C
Storage Temperature	Tstg		–55 to +150	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	V_{CB}=–800V, I_E=0			–1	μA
Emitter Cutoff Current	I_{EBO}	V_{EB}=–5V, I_C=0			–1	μA
DC Current Gain	h_{FE}	V_{CE}=–5V, I_C=–2mA	20		50	
Gain-Bandwidth Product	f_T	V_{CE}=–10V, I_C=–2mA		10		MHz
Output Capacitance	C_{ob}	V_{CB}=–100V, f=1MHz		1.6		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=–1mA, I_B=–200μA			–1	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=–1mA, I_B=–200μA			–1.5	V

SANYO Electric Co.,Ltd. Semiconductor Bussiness Headquaters
TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	I_C=(–)100μA, I_E=0	–800			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	I_C=(–)1mA, R_{BE}=∞	–800			V
Emitter-to-Base Breakdown Votage	$V_{(BR)EBO}$	I_E=(–)100μA, I_C=0	–7			V
Thermal Resistance	$R_{th(j-c)}$	Junction-Case			8.3	˚C/W