

Silicon PNP Power Transistors

2SB919

DESCRIPTION

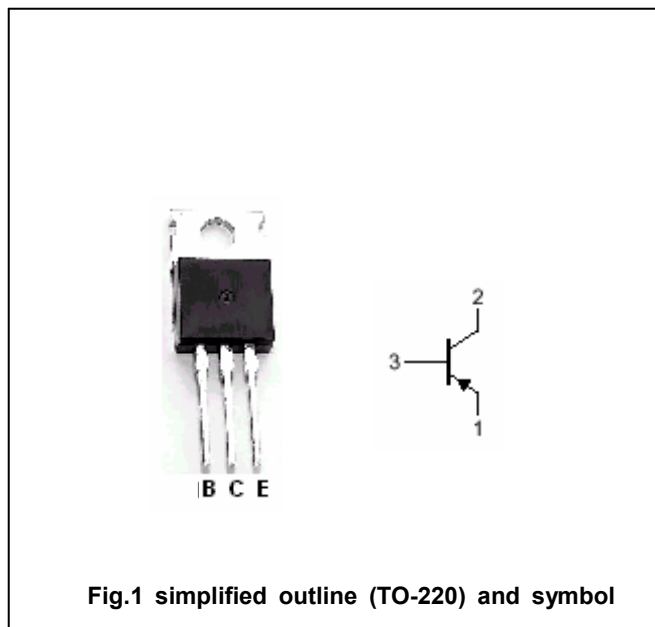
- With TO-220C package
- Complement to type 2SD1235
- Low collector saturation voltage
- Large current capacity

APPLICATIONS

- Large current switching of relay drivers, high-speed inverters, converters

PINNING

PIN	DESCRIPTION
1	Emitter
2	Collector; connected to mounting base
3	Base

Absolute maximum ratings($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-60	V
V_{CEO}	Collector-emitter voltage	Open base	-30	V
V_{EBO}	Emitter-base voltage	Open collector	-6	V
I_C	Collector current (DC)		-8	A
I_{CM}	Collector current-Peak		-15	A
P_C	Collector dissipation	$T_a=25^\circ\text{C}$	1.75	W
		$T_C=25^\circ\text{C}$	30	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-50~150	$^\circ\text{C}$

Silicon PNP Power Transistors

2SB919

CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -1\text{mA}$; $R_{BE} = \infty$	-30			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -1\text{mA}$; $I_E = 0$	-60			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -1\text{mA}$; $I_C = 0$	-6			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C = -3\text{A}$; $I_B = -0.15\text{A}$			-0.5	V
I_{CBO}	Collector cut-off current	$V_{CB} = -40\text{V}$; $I_E = 0$			-0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB} = -4\text{V}$; $I_C = 0$			-0.1	mA
h_{FE-1}	DC current gain	$I_C = -1\text{A}$; $V_{CE} = -2\text{V}$	70		280	
h_{FE-2}	DC current gain	$I_C = -4\text{A}$; $V_{CE} = -2\text{V}$	30			
f_T	Transition frequency	$I_C = -1\text{A}$; $V_{CE} = -5\text{V}$		120		MHz

Switching times

t_{on}	Turn-on time	$I_C = -4\text{A}$; $V_{CC} = -10\text{V}$ $I_{B1} = -I_{B2} = -0.2\text{A}$; $R_L = 2.5\Omega$		0.1		μs
t_{stg}	Storage time			0.2		μs
t_f	Turn-off time			0.03		μs

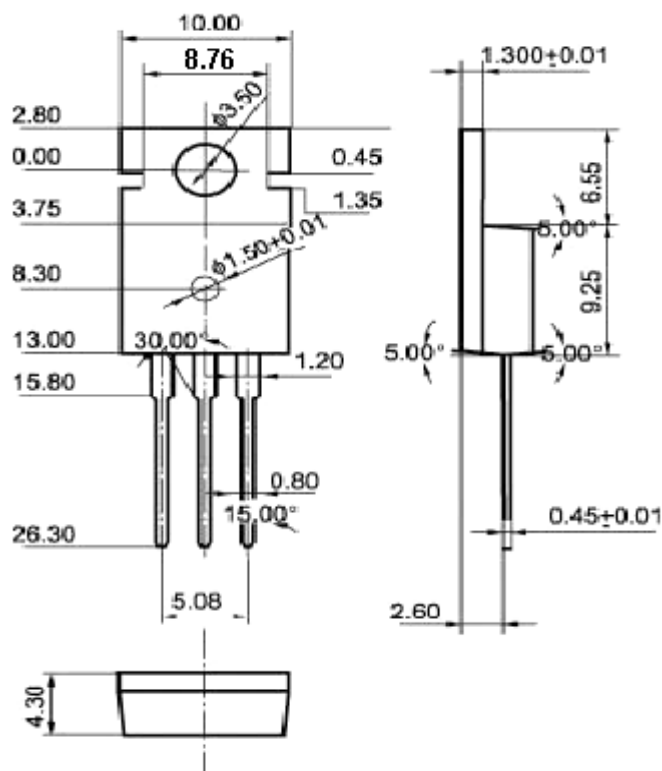
◆ h_{FE-1} Classifications

Q	R	S
70-140	100-200	140-280

Silicon PNP Power Transistors

2SB919

PACKAGE OUTLINE

Fig.2 Outline dimensions (unindicated tolerance: $\pm 0.10\text{mm}$)

Silicon PNP Power Transistors

2SB919

