

Silicon PNP Power Transistor

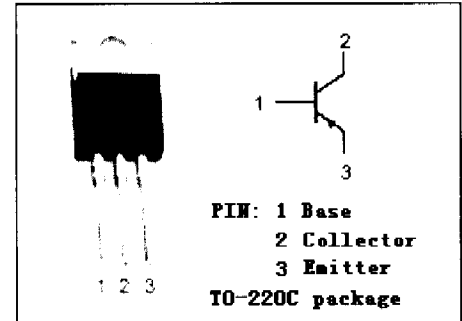
2SB507

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -60V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = -1.0V(\text{Max}) @ I_C = -2.0A$
- Complement to Type 2SD313

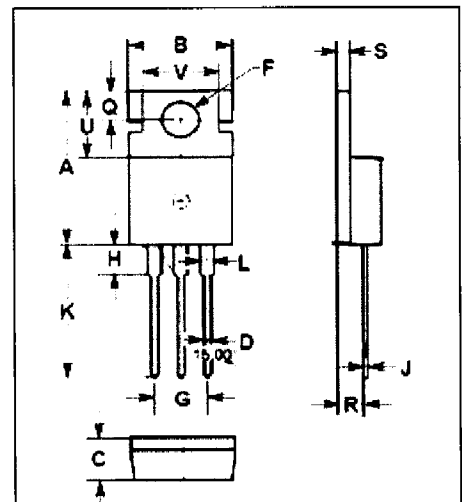
APPLICATIONS

- Designed for the output stage of 15W to 25W AF power amplifier.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-60	V
V_{EBO}	Emitter-Base Voltage	-5.0	V
I_C	Collector Current-Continuous	-3.0	A
I_{CM}	Collector Current-Peak	-6.0	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	30	W
T_J	Junction Temperature	-55~150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



DIM	mm	
	MIN	MAX
A	15.50	15.90
B	9.90	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.70	2.90
J	0.44	0.60
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	4.16	$^\circ\text{C/W}$

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ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}; I_B = 0$	-60			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -2\text{A}; I_B = -0.2\text{A}$			-1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -1\text{A}; V_{CE} = -2\text{V}$			-1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -20\text{V}; I_E = 0$			-100	μA
I_{CEO}	Collector Cutoff Current	$V_{CE} = -60\text{V}; I_B = 0$			-5	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -4\text{V}; I_C = 0$			-1	mA
$h_{FE-1\star}$	DC Current Gain	$I_C = -1\text{A}; V_{CE} = -2\text{V}$	40		320	
h_{FE-2}	DC Current Gain	$I_C = -0.1\text{A}; V_{CE} = -2\text{V}$	40			
f_T	Current-Gain—Bandwidth Product	$I_C = -0.5\text{A}; V_{CE} = -5\text{V}; f_{test} = 1.0\text{MHz}$	5.0			MHz

★Pulse Test :Pulse Width=300us,Cuty cycle $\leq 2.0\%$

◆ h_{FE-1} Classifications

C	D	E	F
40-80	60-120	100-200	160-320