

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

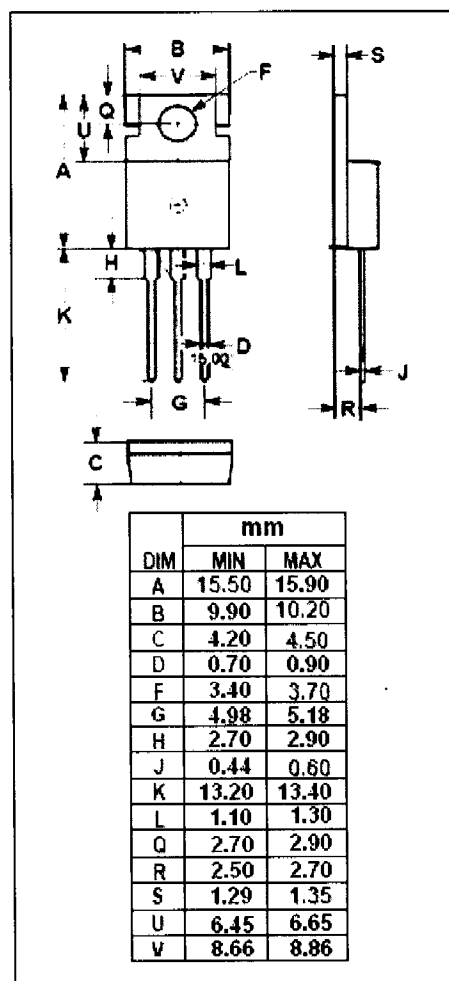
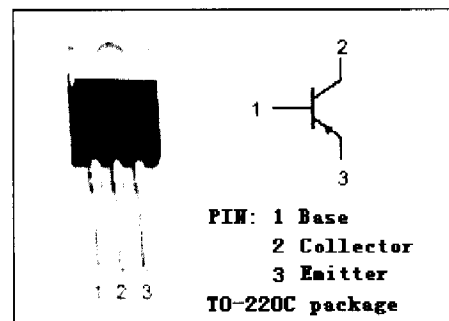
- Designed for the output stage of 15W to 25W AF power amplifier.

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	$^\circ\text{C}$

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