

Silicon PNP Power Transistor

2SB509

DESCRIPTION

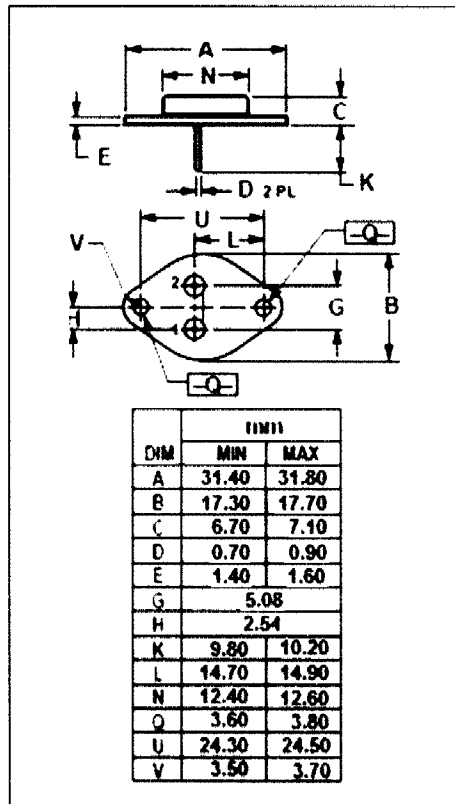
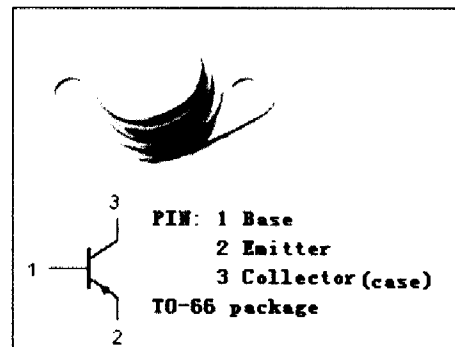
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -60V(\text{Min})$
- Low Collector-Emitter Saturation Voltage
- Complement to Type 2SD315

APPLICATIONS

- Designed for AF power amplifier applications.

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	V
I_C	Collector Current-Continuous	-4	A
I_{CM}	Collector Current-Peak	-10	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	35	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-40~150	$^\circ\text{C}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -2A; I_B = -0.2A$			-1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -1A; V_{CE} = -2V$			-1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB} = -20V; I_E = 0$			-100	μA
I_{EBO}	Emitter Cutoff Current	$V_{EB} = -4V; I_C = 0$			-1.0	mA
h_{FE-1}	DC Current Gain	$I_C = -1A; V_{CE} = -2V$	40		320	
h_{FE-2}	DC Current Gain	$I_C = -0.1A; V_{CE} = -2V$	40			
f_T	Current-Gain—Bandwidth Product	$I_C = -0.5A; V_{CE} = -5V; f_{test} = 1.0\text{MHz}$		8		MHz

◆ h_{FE-1} Classifications

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