

# isc Silicon PNP Power Transistors

## 2SB539

### DESCRIPTION

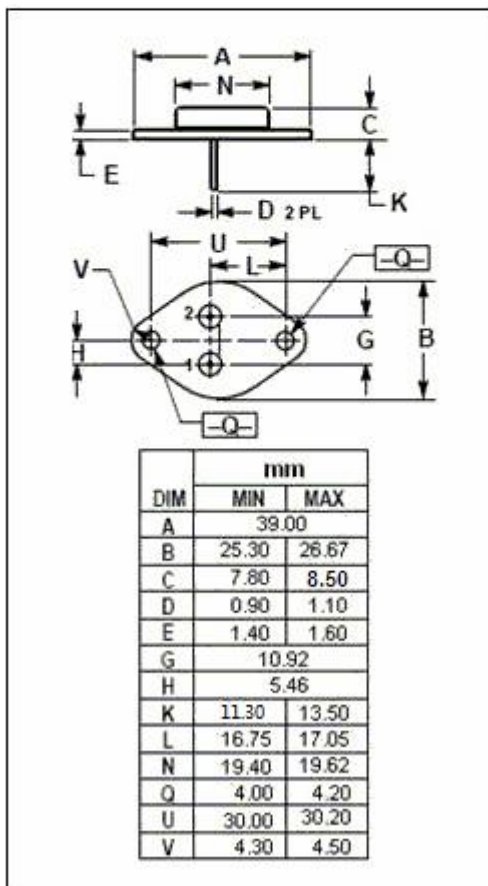
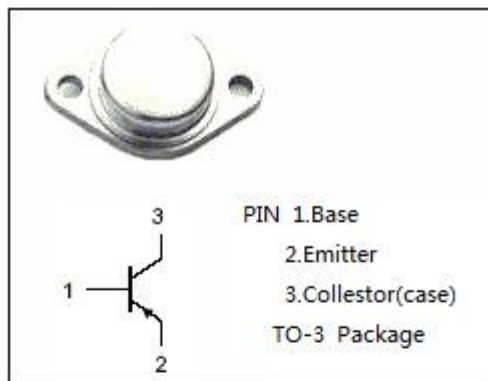
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -120V(\text{Min})$
- High Power Dissipation-  
:  $P_C = 100W(\text{Max})@T_C=25^\circ\text{C}$
- Complement to Type 2SD287
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Designed for audio frequency power amplifier applications.
- Recommended for 70~80W high-fidelity audio frequency amplifier output stage.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-130	V
$V_{CEO}$	Collector-Emitter Voltage	-120	V
$V_{EBO}$	Emitter-Base Voltage	-6	V
$I_C$	Collector Current-Continuous	-10	A
$I_{CM}$	Collector Current-Pulse	-15	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	100	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-65~150	$^\circ\text{C}$



**isc Silicon PNP Power Transistors****2SB539****ELECTRICAL CHARACTERISTICS**T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -6A; I <sub>B</sub> = -0.6A			-2.0	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = -6A; I <sub>B</sub> = -0.6A			-2.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -120V; I <sub>E</sub> = 0			-0.1	mA
I <sub>EB0</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> = 0			-0.1	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -2A; V <sub>CE</sub> = -5V	40		200	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -5A; V <sub>CE</sub> = -5V	25			
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = -10V; f= 1MHz		420		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = -0.2A; V <sub>CE</sub> = -10V		7		MHz

**◆ h<sub>FE-1</sub> Classifications**

S	R	Q
40-80	60-120	100-200

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