

# isc Silicon PNP Power Transistor

## 2SB1089

### DESCRIPTION

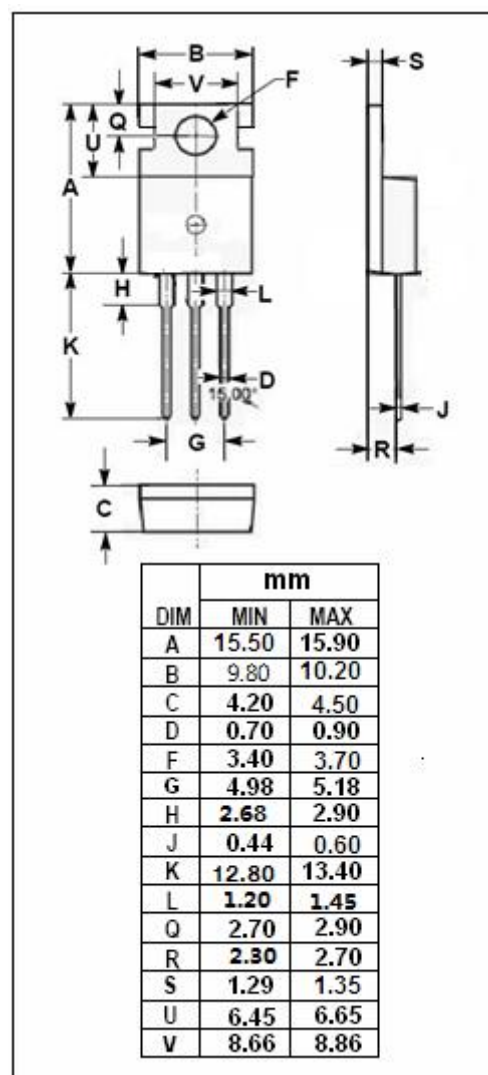
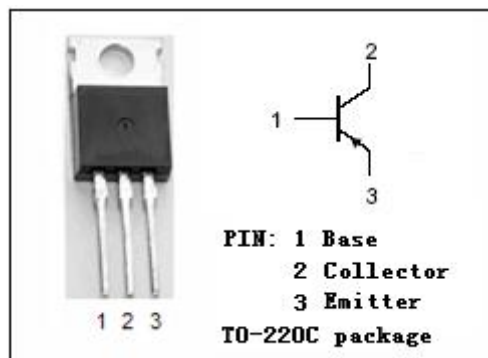
- High Collector Current:  $I_C = -3A$
- Low Collector Saturation Voltage  
:  $V_{CE(sat)} = -1.5V(Max)@I_C = -2A$
- Complement to Type 2SD1567
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Designed for power supplies or a variety of drives in audio and other equipment.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-60	V
$V_{CEO}$	Collector-Emitter Voltage	-60	V
$V_{EBO}$	Emitter-Base Voltage	-7	V
$I_C$	Collector Current-Continuous	-3	A
$I_{CM}$	Collector Current-Peak	-5	A
$I_B$	Base Current-Continuous	-0.6	A
$P_C$	Total Power Dissipation @ $T_a=25^{\circ}C$	1.3	W
	Total Power Dissipation @ $T_C=25^{\circ}C$	30	
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-55~150	$^{\circ}C$



**isc Silicon PNP Power Transistor****2SB1089****ELECTRICAL CHARACTERISTICS****T<sub>c</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> = -2A; I <sub>B</sub> = -0.2A			-1.5	V
V <sub>BE(sat)</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = -2A; I <sub>B</sub> = -0.2A			-2.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -60V; I <sub>E</sub> = 0			-10	μA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -7V; I <sub>C</sub> = 0			-10	μA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -50mA; V <sub>CE</sub> = -5V	20			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -0.5A; V <sub>CE</sub> = -5V	40		200	
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = -10V; f= 1MHz		70		pF
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = -0.1A; V <sub>CE</sub> = -5V		20		MHz

**◆ h<sub>FE-2</sub> Classifications**

M	L	K
40-80	60-120	100-200

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