

## **isc** Silicon PNP Darlington Power Transistor

## 2SB1005

#### DESCRIPTION

- High DC Current Gain-
- : h<sub>FE</sub> = 750(Min)@ I<sub>C</sub>= -1.5A
- Collector-Emitter Sustaining Voltage-: V<sub>CEO(SUS)</sub> = -50V(Min)
- With TO-220C package
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

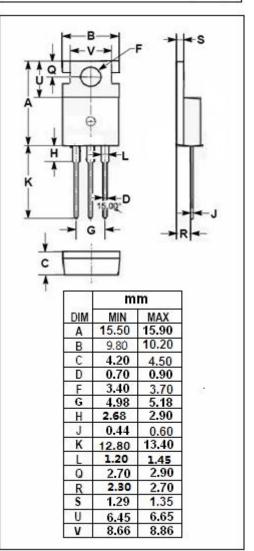
ABSOLUTE MAXIMUM RATINCS (T2=25°C)

#### **APPLICATIONS**

· Designed for audio frequency power amplifier applications

ABSOLUTE MAXIMUM RATINGS (Ta=25 C)						
SYMBOL	PARAMETER	VALUE	UNIT			
V <sub>сво</sub>	Collector-Base Voltage	-50	V			
V <sub>CEO</sub>	Collector-Emitter Voltage	-50	V			
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V			
Ic	Collector Current-Continuous	-4	A			
Pc	Collector Power Dissipation $T_c=25^{\circ}C$	30	W			
Tj	Junction Temperature	150	°C			
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C			

# PIN 1. BASE 2.COLLECTOR 3. BMITTER TO-220C package



1



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## **ELECTRICAL CHARACTERISTICS**

#### T<sub>c</sub>=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	МАХ	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = -30mA, I <sub>B</sub> = 0	-50			V
V(br)cbo	Collector-base breakdown voltage	lc=-1mA, l₌=0	-50			V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation voltage	Ic= -1.5A ,Iв= -30mA			-2.5	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation voltage	I <sub>C</sub> = -4A ,I <sub>B</sub> = -40mA			-4.0	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -50V, I <sub>E</sub> = 0			-0.1	mA
Іево	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> = 0			-2	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -1.5A ; V <sub>CE</sub> = -3V	750			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -4A ; V <sub>CE</sub> = -3V	100			
VF	Diode forward voltage	IF=-4A			3.5	V

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2