

## isc Silicon PNP Darlington Power Transistor

# **KSB601**

### DESCRIPTION

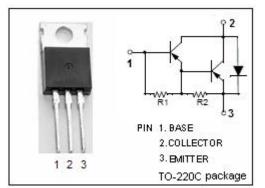
- High DC Current Gain-
- : h<sub>FE</sub> = 2000(Min)@ I<sub>C</sub>= -3A
- Collector-Emitter Sustaining Voltage-
  - : V<sub>CEO(SUS)</sub> = -100V(Min)
- Low Collector-Emitter Saturation Voltage-
  - : V<sub>CE(sat)</sub> = -1.5V(Max)@ I<sub>C</sub>= -3A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

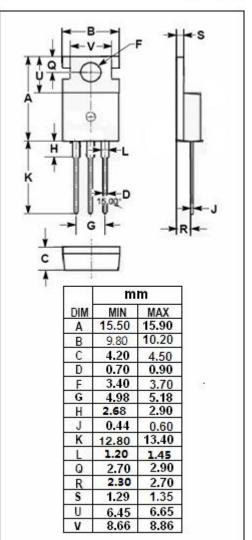
#### APPLICATIONS

- Designed for use in low-frequency power amplifiers and lowspeed switching applications.
- Ideal for use in direct drive from IC output for magnet drivers such as terminal equipment or cash registers.

### ABSOLUTE MAXIMUM RATINGS (Ta=25℃)

SYMBOL	PARAMETER	VALUE		
V <sub>CBO</sub>	Collector-Base Voltage	-100	V	
V <sub>CEO</sub>	Collector-Emitter Voltage	-100	V	
V <sub>EBO</sub>	Emitter-Base Voltage	-7	V	
Ic	Collector Current-Continuous	-5	А	
Ісм	Collector Current-Peak	-8	A	
I <sub>B</sub>	Base Current-DC	-0.5	А	
Pc	Collector Power Dissipation $T_c$ =25 °C	30	14/	
	Collector Power Dissipation $T_a=25^{\circ}C$	1.5	W	
Tj	Junction Temperature	150	°C	
T <sub>stg</sub>	Storage Temperature Range	-55~150	°C	





isc website: www.iscsemi.com



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### **ELECTRICAL CHARACTERISTICS**

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	МАХ	UNIT
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -3A ,I <sub>B</sub> = -3mA			-1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I <sub>C</sub> = -3A ,I <sub>B</sub> = -3mA			-2.0	V
Ісво	Collector Cutoff Current	V <sub>CB</sub> = -100V, I <sub>E</sub> = 0			-10	μA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> = 0			-3	mA
h <sub>FE-1</sub>	DC Current Gain	Ic= -3A ; Vc= -2V	2000		15000	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -5A ; V <sub>CE</sub> = -2V	500			

Switching times

ton	Turn-on Time		0.5	μs
t <sub>stg</sub>	Storage Time	R <sub>L</sub> = 17 Ω , V <sub>CC</sub> ≈ -50V I <sub>C</sub> = -3A; I <sub>B1</sub> = -I <sub>B2</sub> = -3mA	1.0	μs
t <sub>f</sub>	Fall Time		1.0	μ <b>S</b>

#### • h<sub>FE-1</sub> Classifications

R	0	Y
2000-5000	3000-7000	5000-15000

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