

**isc Silicon PNP Darlington Power Transistor**
**2SB1339**
**DESCRIPTION**

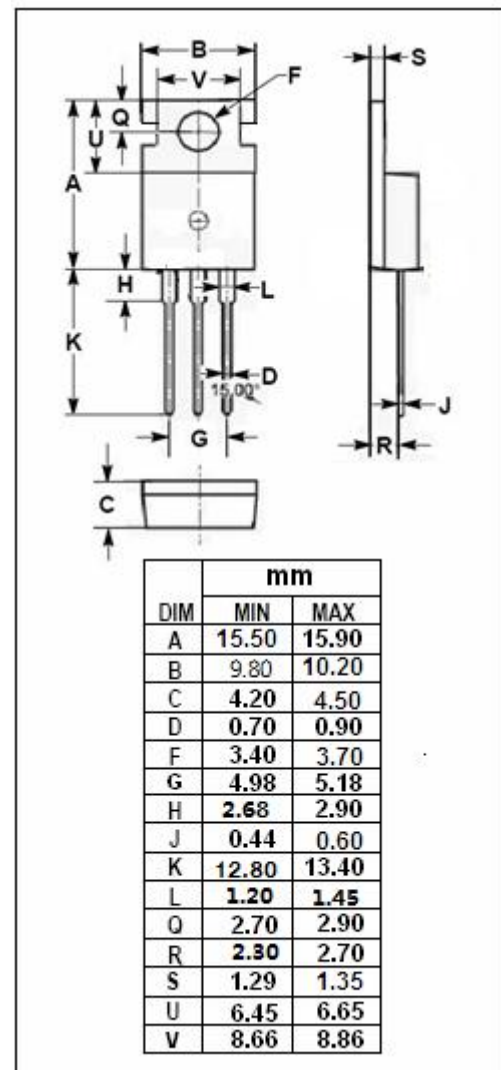
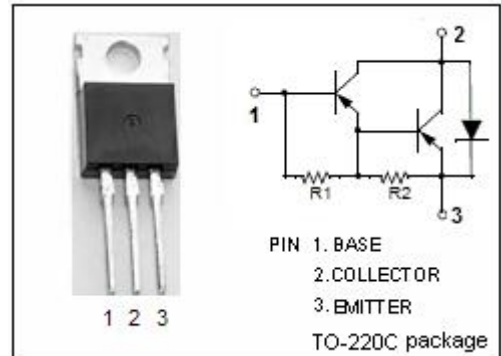
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -120V(\text{Min})$
- High DC Current Gain-  
:  $h_{FE} = 1000(\text{Min})@ (V_{CE} = -3V, I_C = -2A)$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

- Designed for low frequency power amplifiers applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-120	V
$V_{CEO}$	Collector-Emitter Voltage	-120	V
$V_{EBO}$	Emitter-Base Voltage	-7	V
$I_C$	Collector Current-Continuous	-6	A
$I_{CM}$	Collector Current-Peak	-10	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	40	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$



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## ELECTRICAL CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = -30mA; R <sub>BE</sub> = ∞	-120			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = -5mA; I <sub>C</sub> = 0	-7			V
V <sub>CE(sat)-1</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -3A; I <sub>B</sub> = -6mA			-1.5	V
V <sub>CE(sat)-2</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -6A; I <sub>B</sub> = -60mA			-3.0	V
V <sub>BE(sat)-1</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = -3A; I <sub>B</sub> = -6mA			-2.0	V
V <sub>BE(sat)-2</sub>	Base-Emitter Saturation Voltage	I <sub>C</sub> = -6A; I <sub>B</sub> = -60mA			-3.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -120V; I <sub>E</sub> = 0			-10	μ A
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = -100V; R <sub>BE</sub> = ∞			-100	μ A
h <sub>FE</sub>	DC Current Gain	I <sub>C</sub> = -2A; V <sub>CE</sub> = -3V	1000			
Switching Times						
t <sub>on</sub>	Turn-on Time	I <sub>C</sub> = -3A, I <sub>B1</sub> = -I <sub>B2</sub> = -6mA		0.5		μ s
t <sub>stg</sub>	Storage Time			3.0		μ s
t <sub>f</sub>	Fall Time			1.0		μ s

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