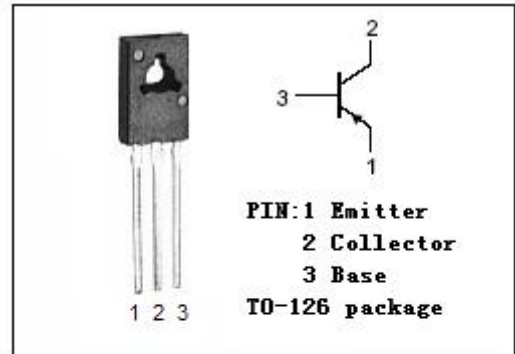


**isc Silicon PNP Power Transistor**
**2SB649A**
**DESCRIPTION**

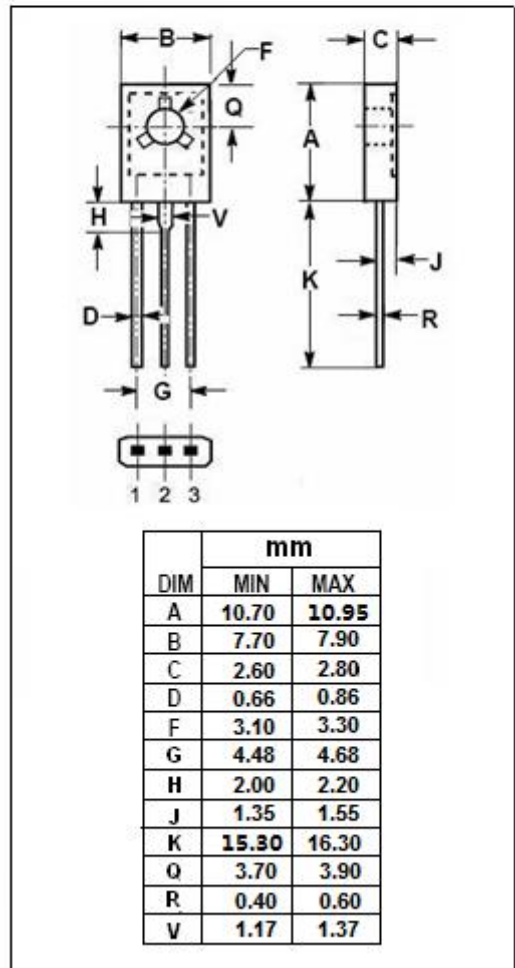
- High Collector Current- $I_C=-1.5A$
- High Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO}=-160V(\text{Min})$
- Good Linearity of  $h_{FE}$
- Low Saturation Voltage
- Complement to Type 2SD669A
- Minimum Lot-to-Lot variations for robust device performance and reliable operation


**APPLICATIONS**

- Power amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-180	V
$V_{CEO}$	Collector-Emitter Voltage	-160	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-1.5	A
$I_{CP}$	Collector Current-Pulse	-3	A
$P_C$	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	20	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	1	
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-55~150	$^\circ\text{C}$



**isc Silicon PNP Power Transistor****2SB649A****ELECTRICAL CHARACTERISTICS**T<sub>C</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CBO</sub>	Collector-Base Breakdown Voltage	I <sub>C</sub> = -1mA ; I <sub>E</sub> = 0	-180			V
V <sub>(BR)CEO</sub>	Collector-Emitter Breakdown Voltage	I <sub>C</sub> = -10mA ; R <sub>BE</sub> = ∞	-160			V
V <sub>(BR)EBO</sub>	Emitter-Base Breakdown Voltage	I <sub>E</sub> = -1mA ; I <sub>C</sub> =0	-5			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -500mA; I <sub>B</sub> = -50mA			-1.0	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = -150mA ; V <sub>CE</sub> = -5V			-1.5	V
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -160V; I <sub>E</sub> = 0			-10	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -150mA ; V <sub>CE</sub> = -5V	60		200	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> =-500mA ; V <sub>CE</sub> = -5V	30			
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = -150mA ; V <sub>CE</sub> = -5V		140		MHz
C <sub>OB</sub>	Output Capacitance	I <sub>E</sub> = 0; V <sub>CB</sub> = -10V, f <sub>test</sub> = 1MHz		27		pF

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

B	C
60-120	100-200

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