

**isc Silicon PNP Power Transistor**
**2SB649**
**DESCRIPTION**

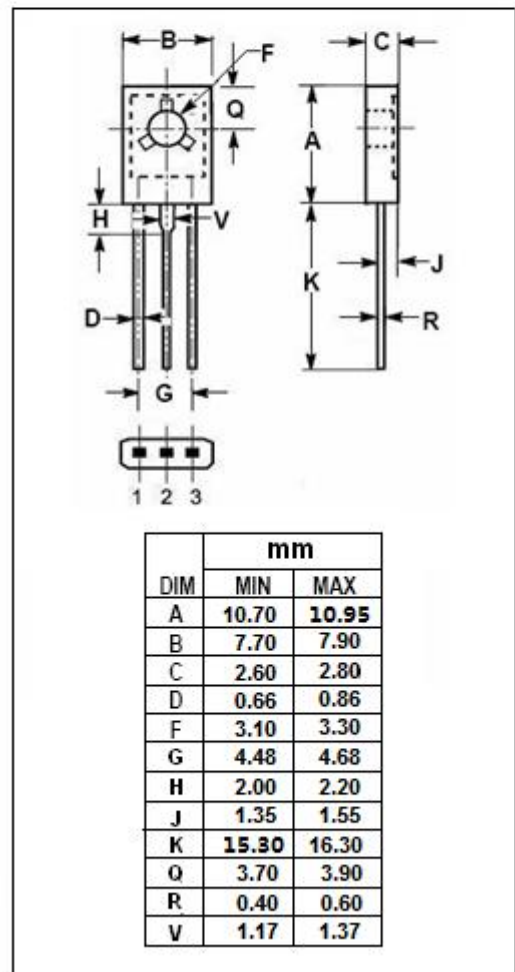
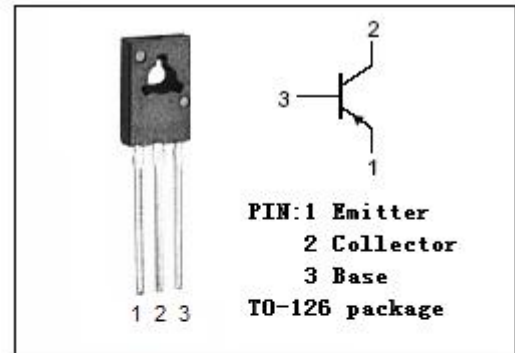
- High Collector Current- $I_C=-1.5A$
- High Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO}=-120V(\text{Min})$
- Good Linearity of  $h_{FE}$
- Low Saturation Voltage
- Complement to Type 2SD669
- Minimum Lot-to-Lot variations for robust device performance and reliable operation


**APPLICATIONS**

- Power amplifier applications

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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-160	V
$V_{CEO}$	Collector-Emitter Voltage	-120	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****2SB649****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = -1\text{mA}$ ; $I_E = 0$	-180			V
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}$ ; $R_{BE} = \infty$	-120			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = -1\text{mA}$ ; $I_C = 0$	-5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -500\text{mA}$ ; $I_B = -50\text{mA}$			-1.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -150\text{mA}$ ; $V_{CE} = -5\text{V}$			-1.5	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -160\text{V}$ ; $I_E = 0$			-10	$\mu\text{A}$
$h_{FE-1}$	DC Current Gain	$I_C = -150\text{mA}$ ; $V_{CE} = -5\text{V}$	60		320	
$h_{FE-2}$	DC Current Gain	$I_C = -500\text{mA}$ ; $V_{CE} = -5\text{V}$	30			

◆  **$h_{FE-1}$  Classifications**

B	C	D
60-120	100-200	160-320

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