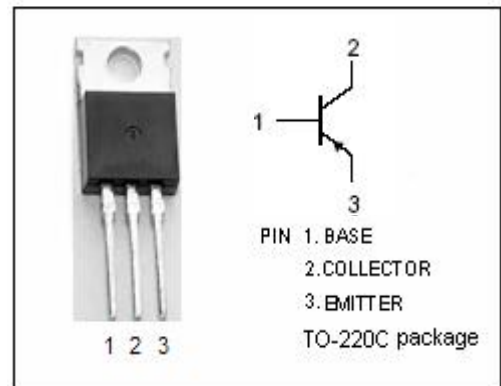


**isc Silicon PNP Power Transistor**
**BD710**
**DESCRIPTION**

- DC Current Gain -  
:  $h_{FE} = 40(\text{Min.}) @ I_C = -0.5\text{A}$
- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(\text{SUS})} = -80\text{V}(\text{Min.})$
- Complement to Type BD709
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

**APPLICATIONS**

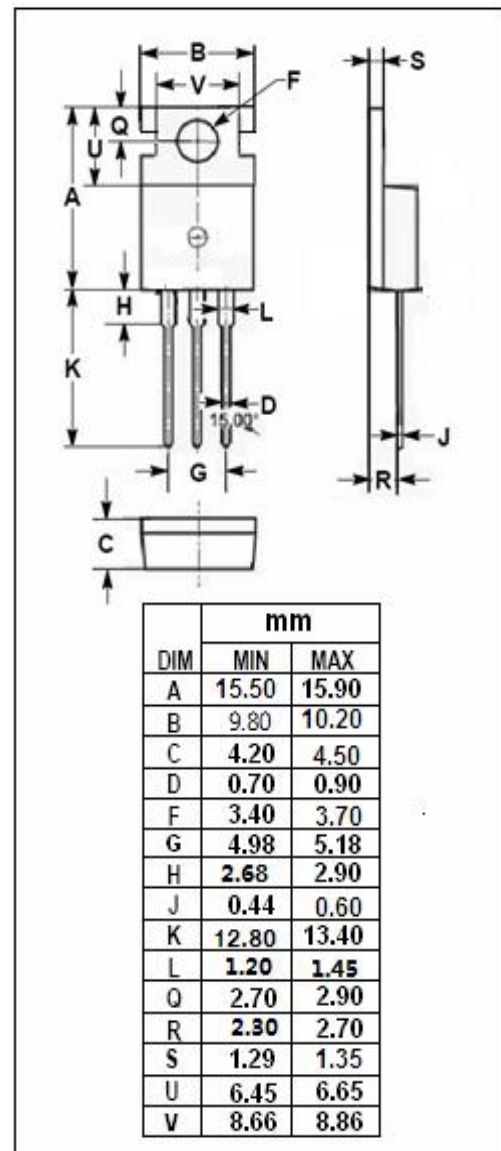
- Designed for use in power linear and switching applications.


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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-80	V
$V_{CES}$	Collector-Emitter Voltage $V_{BE} = 0$	-80	V
$V_{CEO}$	Collector-Emitter Voltage	-80	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-12	A
$I_B$	Base Current-Continuous	-5	A
$P_C$	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	75	W
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.67	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	70	$^\circ\text{C/W}$



## isc Silicon PNP Power Transistor

BD710

## ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = -30mA; I <sub>B</sub> = 0	-80		V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -4A; I <sub>B</sub> = -0.4A		-1.0	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = -4A; V <sub>CE</sub> = -4V		-1.5	V
I <sub>CEO</sub>	Collector Cutoff Current	V <sub>CE</sub> = -40V; I <sub>B</sub> = 0		-1.0	mA
I <sub>CBO</sub>	Collector Cutoff Current	V <sub>CB</sub> = -80V; I <sub>E</sub> = 0 V <sub>CB</sub> = -80V; I <sub>E</sub> = 0; T <sub>C</sub> = 150°C		-0.1 -1.0	mA
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> = 0		-1.0	mA
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -0.5A; V <sub>CE</sub> = -2V	40	400	
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -2A; V <sub>CE</sub> = -2V	30		
h <sub>FE-3</sub>	DC Current Gain	I <sub>C</sub> = -4A; V <sub>CE</sub> = -4V	20	150	
h <sub>FE-4</sub>	DC Current Gain	I <sub>C</sub> = -10A; V <sub>CE</sub> = -4V	5		
f <sub>T</sub>	Current-Gain—Bandwidth Product	I <sub>C</sub> = -0.3A; V <sub>CE</sub> = -3V	3		MHz

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