

**isc Silicon PNP Power Transistor**

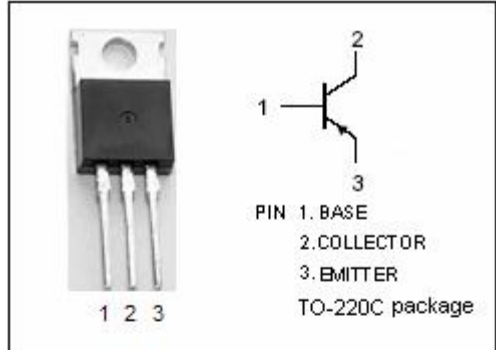
**BD277**

**DESCRIPTION**

- Wide Area of Safe Operation
- Low Saturation Voltage-
- High Power Dissipation

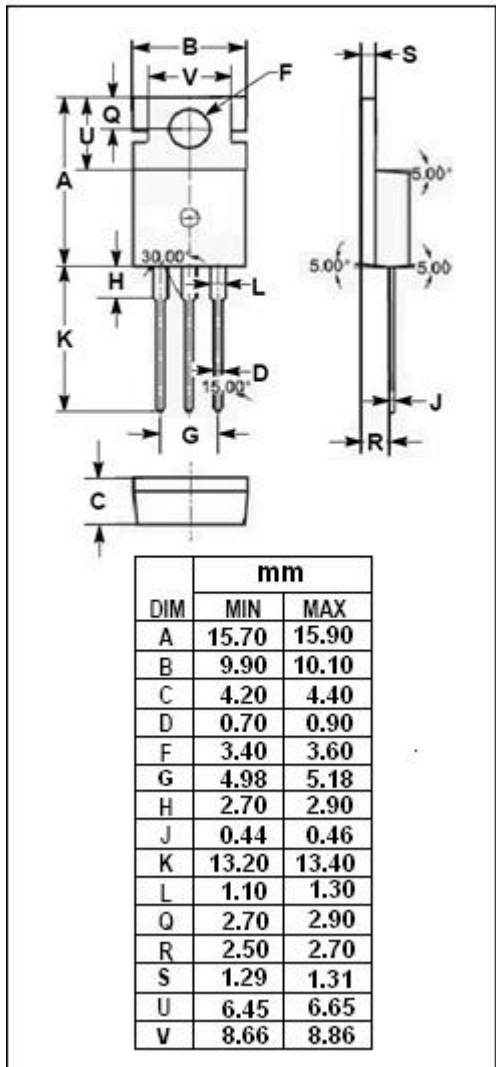
**APPLICATIONS**

- Designed for use in series regulators and shunt regulators.



**ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)**

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	-45	V
V <sub>CEO</sub>	Collector-Emitter Voltage	-45	V
V <sub>EBO</sub>	Emitter-Base Voltage	-4	V
I <sub>C</sub>	Collector Current-Continuous	-7	A
I <sub>B</sub>	Base Current	-3	A
P <sub>C</sub>	Collector Power Dissipation @ T <sub>C</sub> =25°C	70	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature Range	-65~150	°C



**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	1.78	°C/W
R <sub>th j-a</sub>	Thermal Resistance, Junction to Ambient	70	°C/W

**isc Silicon PNP Power Transistor****BD277****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = -0.1\text{A}; I_B = 0$	-45		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -1.75\text{A}; I_B = -0.1\text{A}$		-0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = -1.75\text{A}; V_{CE} = -2\text{V}$		-1.2	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = -45\text{V}; I_E = 0$		-0.1	mA
		$V_{CB} = -40\text{V}; I_E = 0; T_C = 150^\circ\text{C}$		-2.0	
$I_{CEO}$	Collector Cutoff Current	$V_{CE} = -30\text{V}; I_B = 0$		-1.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = -4\text{V}; I_C = 0$		-1.0	mA
$h_{FE}$	DC Current Gain	$I_C = -1.75\text{A}; V_{CE} = -2\text{V}$	30	150	
$f_T$	Current-Gain—Bandwidth Product	$I_C = -0.5\text{A}; V_{CE} = -4\text{V}$	10		MHz