

SPTECH Silicon PNP Power Transistor

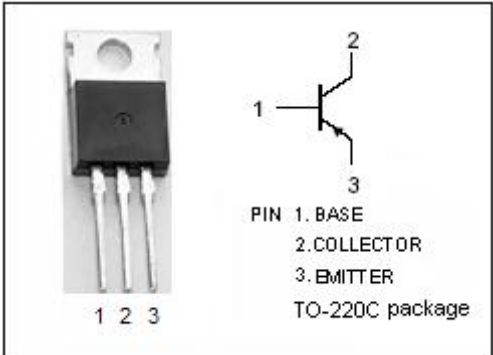
BD277

DESCRIPTION

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

APPLICATIONS

- Designed for use in series regulators and shunt regulators.

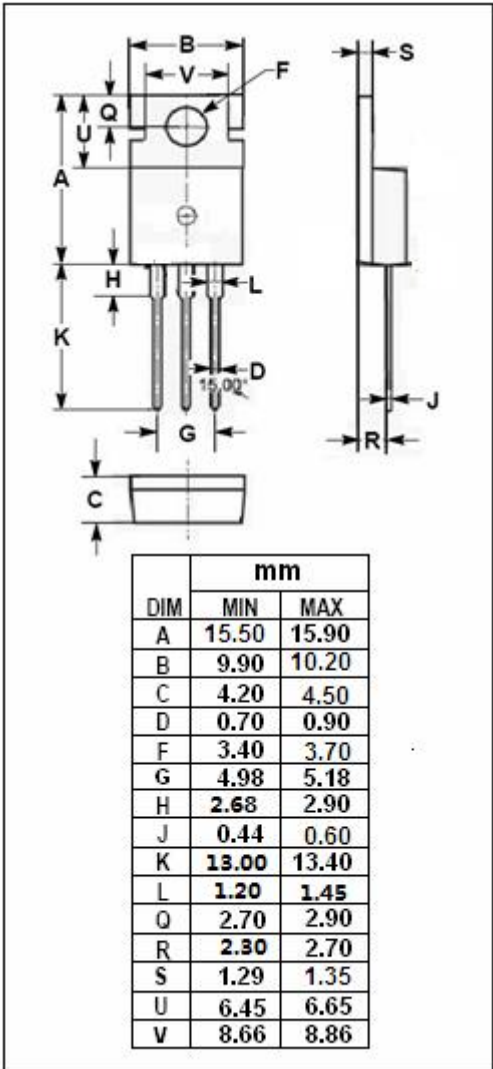


ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-45	V
V_{CEO}	Collector-Emitter Voltage	-45	V
V_{EBO}	Emitter-Base Voltage	-4	V
I_{C}	Collector Current-Continuous	-7	A
I_{B}	Base Current	-3	A
P_{C}	Collector Power Dissipation @ $T_{\text{C}}=25^{\circ}\text{C}$	70	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
$R_{\text{th j-c}}$	Thermal Resistance, Junction to Case	1.78	$^{\circ}\text{C/W}$
$R_{\text{th j-a}}$	Thermal Resistance, Junction to Ambient	70	$^{\circ}\text{C/W}$



SPTECH 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	$I_C = -30\text{mA}$; $I_B = 0$	-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