

SPTECH Silicon NPN Power Transistor

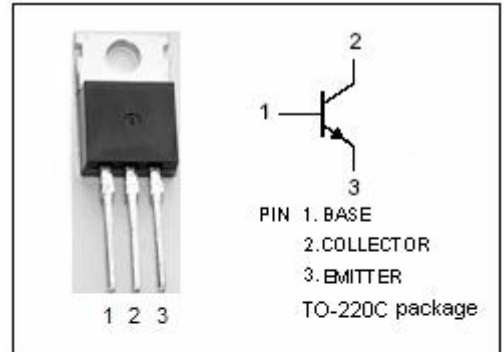
BD907

DESCRIPTION

- DC Current Gain -
: $h_{FE} = 40 @ I_C = 0.5A$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 60V(\text{Min})$
- Complement to Type BD908

APPLICATIONS

- Designed for use in general purpose power amplifier and switching applications.

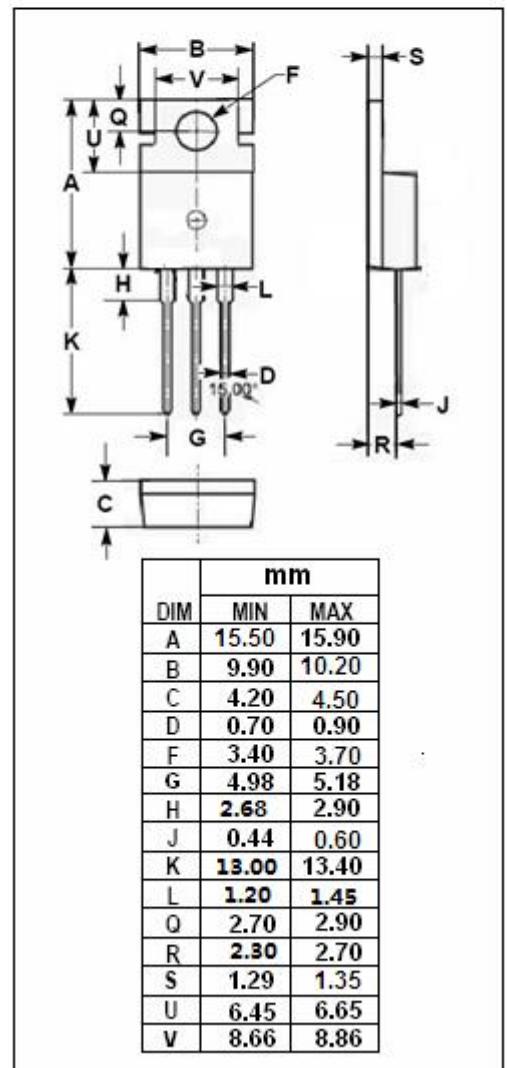


ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current	5	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	90	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	1.38	$^\circ\text{C}/\text{W}$



ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C= 50\text{mA}; I_B= 0$	60		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 5\text{A}; I_B= 0.5\text{A}$		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 10\text{A}; I_B= 2.5\text{A}$		3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 10\text{A}; I_B= 2.5\text{A}$		2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C= 5\text{A}; V_{CE}= 4\text{V}$		1.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 60\text{V}; I_E= 0$		0.5	mA
I_{CEO}	Collector Cutoff Current	$V_{CE}= 30\text{V}; I_B= 0$		1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5\text{V}; I_C= 0$		1.0	mA
h_{FE-1}	DC Current Gain	$I_C= 0.5\text{A}; V_{CE}= 4\text{V}$	40	250	
h_{FE-2}	DC Current Gain	$I_C= 5\text{A}; V_{CE}= 4\text{V}$	15	150	
h_{FE-3}	DC Current Gain	$I_C= 10\text{A}; V_{CE}= 4\text{V}$	5		
f_T	Current-Gain—Bandwidth Product	$I_C= 0.5\text{A}; V_{CE}= 4\text{V}; f_{test}= 1.0\text{MHz}$	3.0		MHz