

SPTECH Silicon PNP Power Transistor

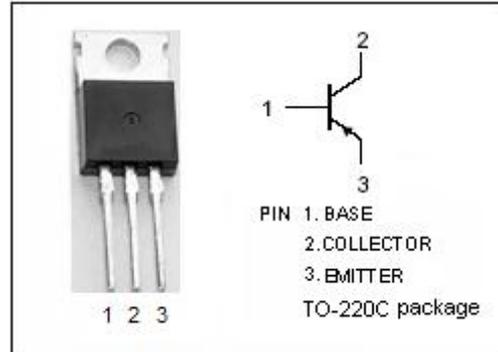
BD906

DESCRIPTION

- DC Current Gain -
: $h_{FE} = 40(\text{Min.}) @ I_C = -0.5\text{A}$
- Collector-Emitter Sustaining Voltage-
: $V_{CEO(\text{SUS})} = -45\text{V}(\text{Min})$
- Complement to Type BD905

APPLICATIONS

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

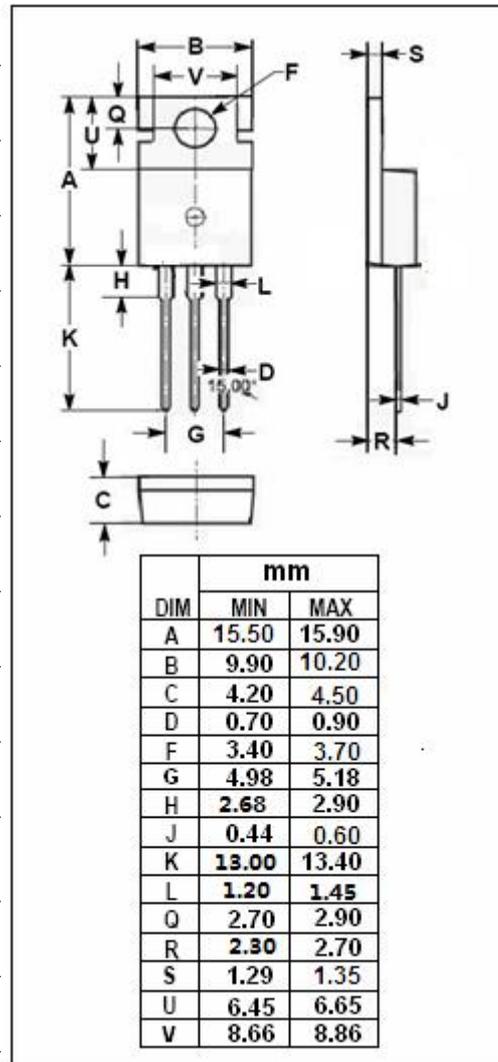


ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-45	V
V_{CEO}	Collector-Emitter Voltage	-45	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	$^\circ\text{C/W}$



ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C = -30\text{mA}; I_B = 0$	-45		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	$V_{CB} = -45\text{V}; I_E = 0$		-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