

SPTECH Silicon NPN Power Transistor

BU902

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 480V(\text{Min.})$
- High Speed Switching
- High Power Dissipation

APPLICATIONS

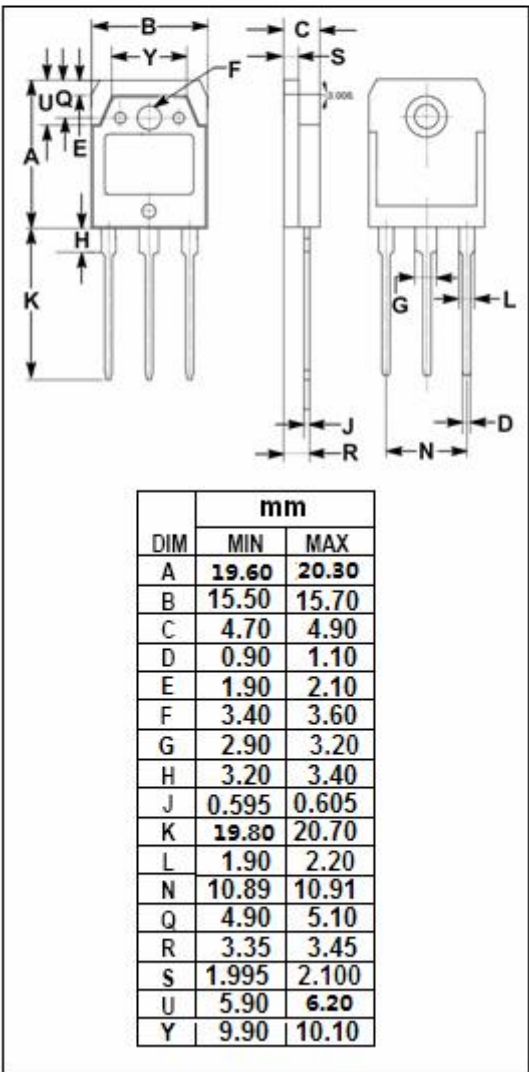
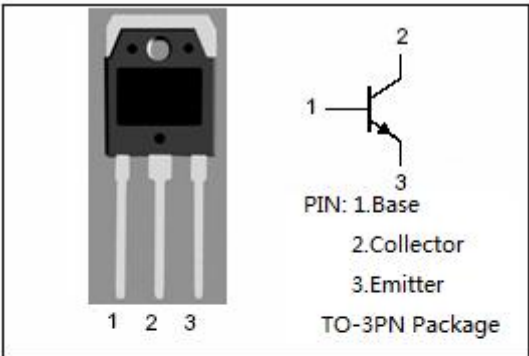
- Designed for use in switching mode power supply.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CER}	Collector-Emitter Voltage $R_{BE} \approx 100 \Omega$	1100	V
V_{CES}	Collector-Emitter Voltage	1100	V
V_{CEO}	Collector-Emitter Voltage	480	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-Peak	10	A
I_B	Base Current-Continuous	4	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}\text{C}$	100	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	1.25	$^{\circ}\text{C/W}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=50\text{mA}; I_B=0$	480			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=1\text{mA}; I_C=0$	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=1\text{A}$			2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=0.8\text{A}$			1.4	V
I_{CES}	Collector Cutoff Current	$V_{CE}=1100\text{V}; V_{BE}=0;$ $V_{CE}=1100\text{V}; V_{BE}=0; T_C=125^{\circ}\text{C}$			1.0 2.0	mA
h_{FE-1}	DC Current Gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	10			
h_{FE-2}	DC Current Gain	$I_C=4\text{A}; V_{CE}=5\text{V}$	5.5			
f_T	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=10\text{V}$		10		MHz