

SPTECH Silicon NPN Power Transistors

BU128

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 200V(\text{Min.})$
- Collector Current- $I_C = 10A$

APPLICATIONS

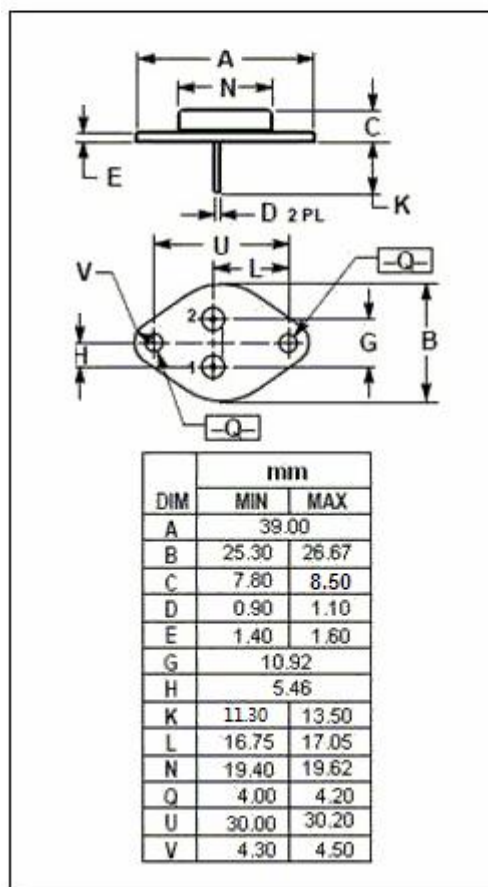
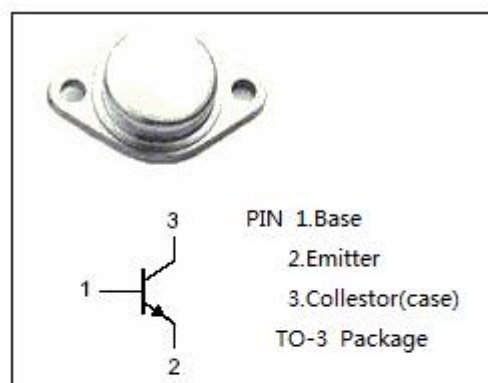
- Designed for use in regulator, inverter, switching mode power supply.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage	300	V
V_{CEO}	Collector-Emitter Voltage	200	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	10	A
I_{CM}	Collector Current-Peak	6	A
I_B	Base Current-Continuous	2	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	62.5	W
T_j	Junction Temperature	125	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~125	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.5	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=50\text{mA}; I_B=0$	200			V
$V_{(BR)EBO}$	Collector-Base Breakdown Voltage	$I_E=1\text{mA}; I_C=0$	6			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=2.5\text{A}; I_B=0.25\text{A}$			10	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=1\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=4\text{A}; I_B=1\text{A}$			1.5	V
I_{CES}	Collector Cutoff Current	$V_{CE}=300\text{V}; V_{BE}=0$ $V_{CE}=300\text{V}; V_{BE}=0; T_a=125^{\circ}\text{C}$			0.5 2.0	mA
h_{FE}	DC Current Gain	$I_C=1\text{A}; V_{CE}=15\text{V}$	40			
f_T	Current-Gain—Bandwidth Product	$I_C=0.2\text{A}; V_{CE}=10\text{V}$		60		MHz
t_f	Fall Time	$I_C=2.5\text{A}; I_B=0.25\text{A}$		0.2		μs