

SPTECH Silicon NPN Power Transistor

BUS13A

DESCRIPTION

High Switching Speed

- High Voltage

APPLICATIONS

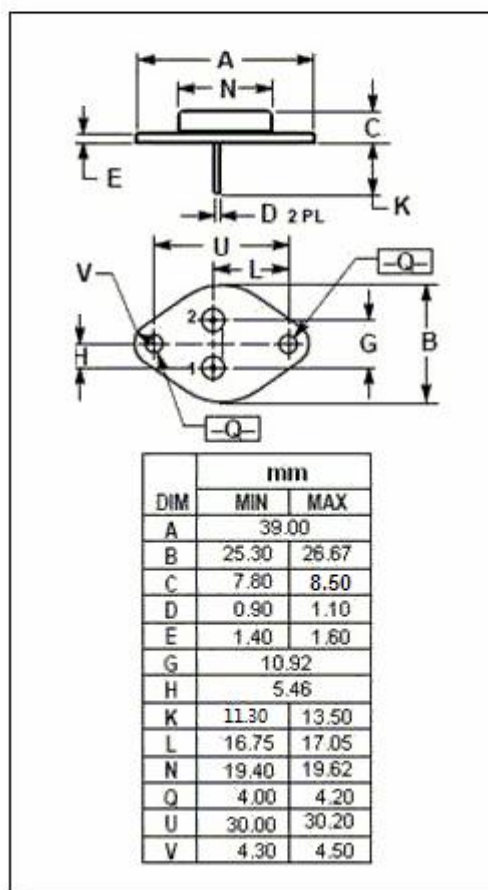
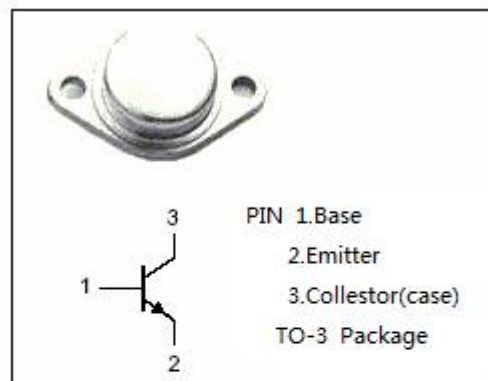
- Converters
- Inverters
- Switching regulators
- Motor controls

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

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	1000	V
V_{CEO}	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base Voltage	9	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current	6	A
I_{BM}	Base Current-Peak	9	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	175	W
T_j	Junction Temperature	200	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~200	$^\circ\text{C}$

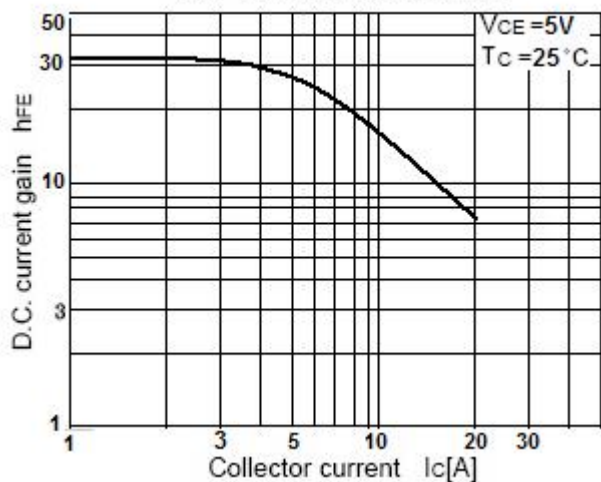
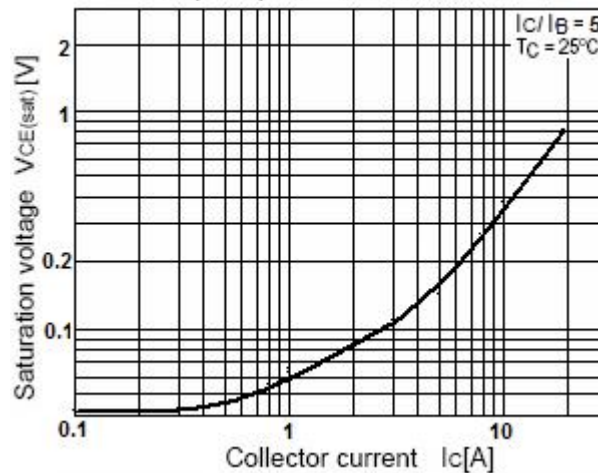
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	1.0	$^\circ\text{C/W}$



SPTECH Silicon NPN Power Transistor**BUS13A****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	$I_C=50\text{mA}$; $I_B=0$	450			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=8\text{A}$; $I_B=1.6\text{A}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=8\text{A}$; $I_B=1.6\text{A}$			1.6	V
I_{CES}	Collector Cutoff Current	$V_{CE}=V_{CESMmax}$; $V_{BE}=0$ $V_{CE}=V_{CESMmax}$; $V_{BE}=0$; $T_C=125^{\circ}\text{C}$			1 4	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=9\text{V}$; $I_C=0$			10	mA
h_{FE}	DC Current Gain	$I_C=2\text{A}$; $V_{CE}=5\text{V}$	15		50	

$h_{FE}-I_C$ Characteristics $V_{CE(sat)}-I_C$ Characteristics $V_{BE(sat)}-I_C$ Characteristics