

SPTECH Silicon PNP Power Transistor

2N5685

DESCRIPTION

- High DC Current Gain- $h_{FE}=15\sim60@I_C = -50A$
- Low Saturation Voltage-
 $V_{CE(sat)}= -1.0V(Max)@ I_C = -25A$

APPLICATIONS

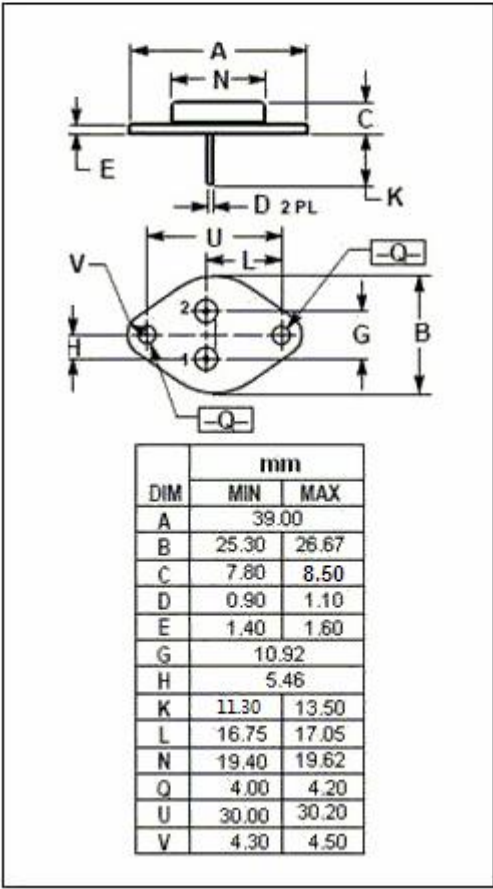
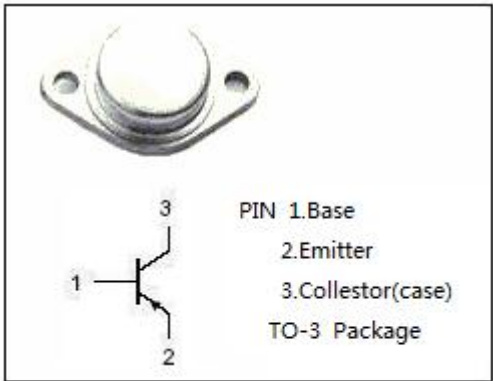
- Designed for use in high power amplifier and switching circuits applications.

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

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	-50	A
I_B	Base Current-Continuous	-15	A
P_C	Collector Power Dissipation @ $T_C=25^{\circ}C$	300	W
T_J	Junction Temperature	150	$^{\circ}C$
T_{stg}	Storage Temperature	-65~150	$^{\circ}C$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.584	$^{\circ}C/W$



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ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	$I_C=-50\text{mA}$; $I_B=0$	-60		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C=-25\text{A}$; $I_B=-2.5\text{A}$		-1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C=-50\text{A}$; $I_B=-10\text{A}$		-5.0	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	$I_C=-25\text{A}$; $I_B=-2.5\text{A}$		-2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C=-25\text{A}$; $V_{CE}=-2\text{V}$		-2.0	V
I_{CEO}	Collector Cutoff Current	$V_{CE}=-40\text{V}$; $I_B=0$		-1	mA
I_{CEX}	Collector Cutoff Current	$V_{CE}=-60\text{V}$; $V_{BE(off)}=-1.5\text{V}$ $V_{CE}=-60\text{V}$; $V_{BE(off)}=-1.5\text{V}$, $T_C=150^{\circ}\text{C}$		-2 -10	mA
I_{CBO}	Collector Cutoff Current	$V_{CB}=-60\text{V}$; $I_C=0$		-2	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=-5\text{V}$; $I_C=0$		-5	mA
h_{FE-1}	DC Current Gain	$I_C=-25\text{A}$; $V_{CE}=-2\text{V}$	15	60	
h_{FE-2}	DC Current Gain	$I_C=-50\text{A}$; $V_{CE}=-5\text{V}$	5		
f_T	Current Gain-Bandwidth Product	$I_C=-5\text{A}$; $V_{CE}=-10\text{V}$; $f=1.0\text{MHz}$	2		MHz