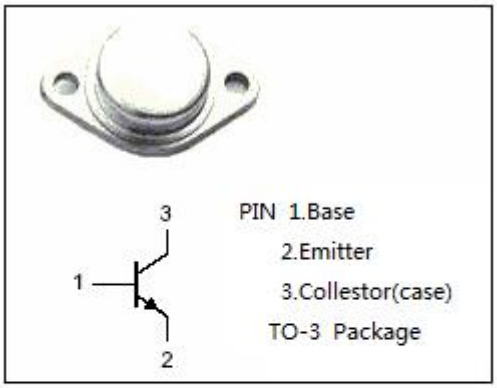
SPTECH Silicon NPN Power Transistor

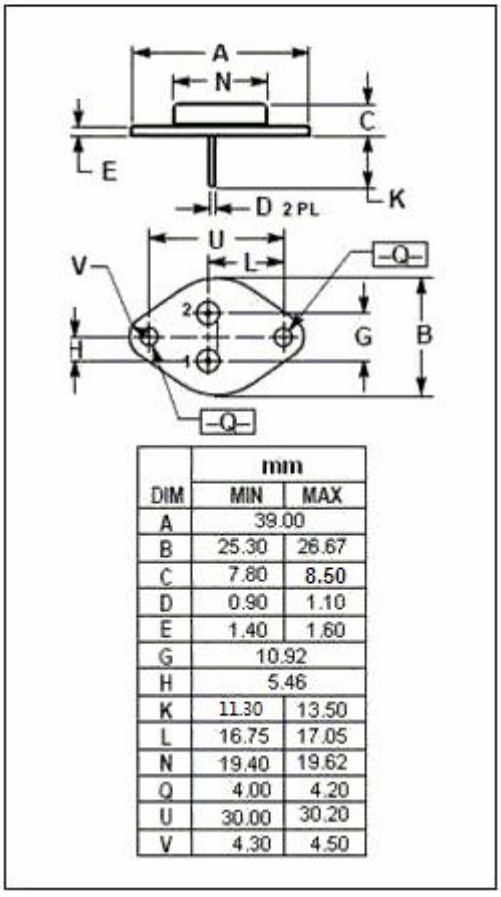


DESCRIPTION

- High DC Current Gain-h_{FE}=15~60@I_C = 25A
- Low Saturation Voltage-
  $V_{CE(sat)}$= 1.0V(Max)@ I_C = 25A

APPLICATIONS

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



DIM	mm	
	MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	80	V
V_{CEO}	Collector-Emitter Voltage	80	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℃	300	W
T_J	Junction Temperature	200	℃
T_{stg}	Storage Temperature	-65~200	℃

THERMAL CHARACTERISTICS

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

SPTECH Silicon NPN Power Transistor

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C=50mA ; I_B=0	80		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 25A; I_B=2.5A		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 50A; I_B=10A		5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 25A; I_B=2.5A		2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 25A ; V_{CE}=2V		2.0	V
I_{CEO}	Collector Cutoff Current	V_{CE}=40V; I_B=0		1	mA
I_{CBO}	Collector Cutoff Current	V_{CB}= 80V; I_C=0		2	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C=0		5	mA
h_{FE-1}	DC Current Gain	I_C= 25A ; V_{CE}= 2V	15	60	
h_{FE-2}	DC Current Gain	I_C= 50A ; V_{CE}= 5V	5		
f_T	Current Gain-Bandwidth Product	I_C= 5A ; V_{CE}= 10V;f=1.0MHz	2		MHz