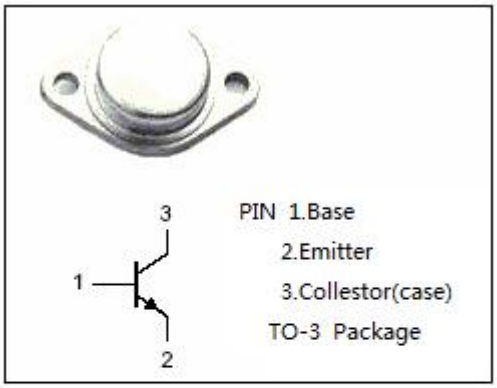
SPTECH Silicon NPN Power Transistors

DESCRIPTION

- DC Current Gain-
  : h_{FE}= 20-100@I_C= 30A
- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 2.0V(Max)@ I_C= 20A

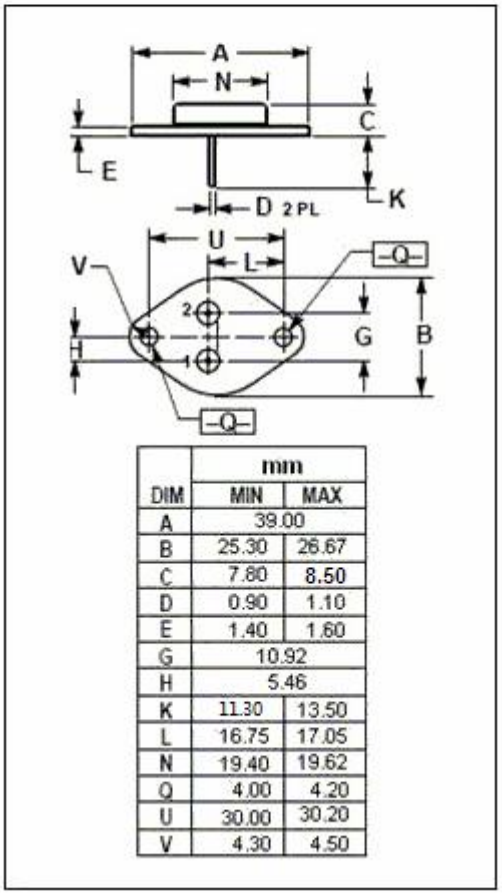


APPLICATIONS

- Designed for use in power switching circuits,audio amplifiers, series and shunt-regulators, driver and output stages,DC-DC converters, inverters, and solenoid /relay driver service.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	90	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	30	A
I_B	Base Current-Continuous	7.5	A
P_C	Collector Power Dissipation @T_C=25℃	175	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃



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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.875	℃/W

SPTECH Silicon NPN Power Transistors

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 50mA ; I_B= 0	80			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 20A; I_B= 1.3A			2.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 30A ; V_{CE}= 4V			3.5	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 80V; I_B= 0			2.0	mA
I_{CBO}	Collector Cutoff Current	V_{CB}= 90V; I_E= 0			1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			1.0	mA
h_{FE}	DC Current Gain	I_C= 30A ; V_{CE}= 4V	20		100	
f_T	Current-Gain—Bandwidth Product	I_C= 1A ; V_{CE}= 10V ;f_{test}= 1MHz		30		MHz