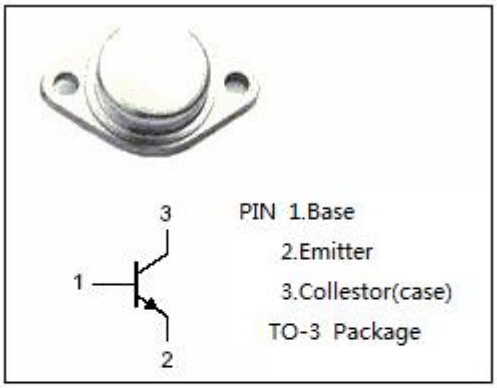
SPTECH Silicon NPN Power Transistor

DESCRIPTION

- Excellent Safe Operating Area
- DC Current Gain-h_{FE}= 25(Min.)@I_C = 5A
- Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 1.0 V(Max)@ I_C = 8A
- Complement to Type BD318

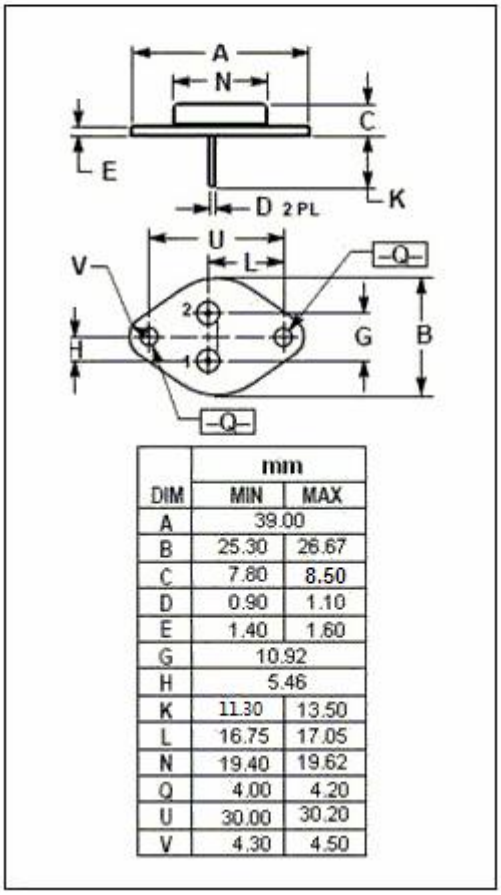


APPLICATIONS

- Designed for high quality amplifiers operating up to 100 watts into 8 ohm load.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	100	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	16	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	5	A
P_C	Collector Power Dissipation@T_C=25℃	200	W
T_J	Junction Temperature	200	℃
T_{stg}	Storage Temperature	-65~200	℃



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 Transistor

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C=30mA; I_B=0	100		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 8A; I_B= 0.8A		1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 8A; I_B= 0.8A		1.8	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 8A; V_{CE}= 2V		1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 100V; I_B=0		1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C=0		1.0	mA
h_{FE-1}	DC Current Gain	I_C= 5A; V_{CE}= 4V	25		
h_{FE-2}	DC Current Gain	I_C= 10A; V_{CE}= 4V	15		
f_T	Current Gain-Bandwidth Product	I_C= 1A; V_{CE}= 20V	1		MHz