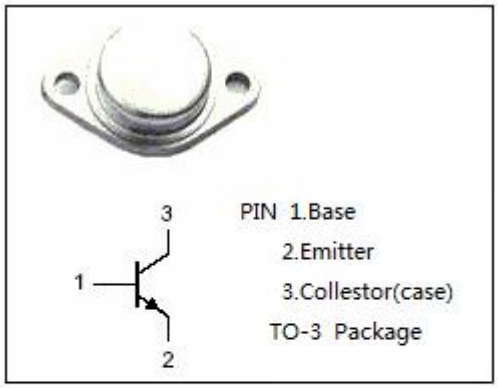
SPTECH Silicon NPN Power Transistors

DESCRIPTION

- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 1.0V(Max.)@ I_C= 7A
- DC Current Gain-
  : h_{FE}= 20-100 @I_C= 6A
- Complement to Type 2N5880



APPLICATIONS

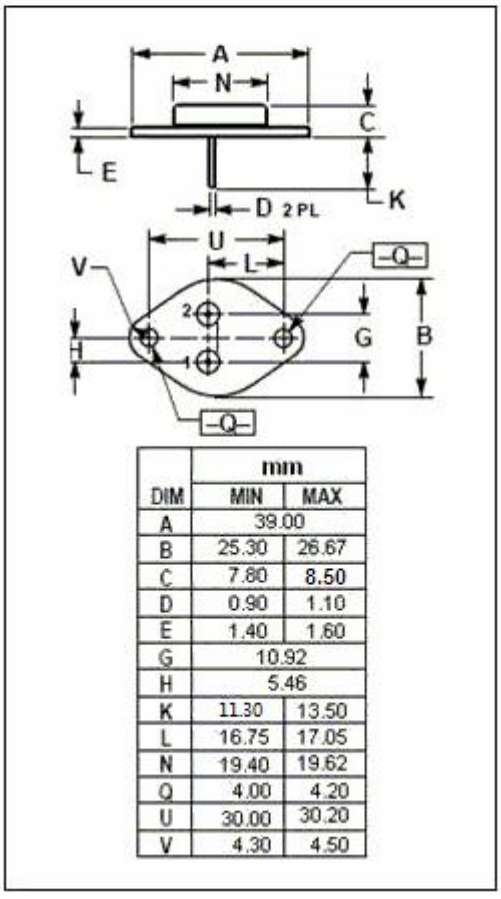
- Designed for general-purpose power amplifier and switching applications.

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	15	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current-Continuous	5	A
P_C	Collector Power Dissipation@T_C=25℃	160	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.1	℃/W



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

SPTECH Silicon NPN Power Transistors

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= 7A; I_B= 0.7A		1.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 15A; I_B= 3.75A		4.0	v
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 15A; I_B= 3.75A		2.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 6A; V_{CE}= 4V		1.5	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 40V; I_B= 0		1.0	mA
I_{CEX}	Collector Cutoff Current	V_{CE}= 80V; $V_{BE(off)}$= 1.5V; V_{CE}= 80V; $V_{BE(off)}$= 1.5V; T_C= 150℃		0.5 5.0	mA
I_{CBO}	Collector Cutoff Current	V_{CB}= 80V; I_E= 0		0.5	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0		1.0	mA
h_{FE-1}	DC Current Gain	I_C= 2A; V_{CE}= 4V	35		
h_{FE-2}	DC Current Gain	I_C= 6A; V_{CE}= 4V	20	100	
h_{FE-3}	DC Current Gain	I_C= 15A; V_{CE}= 4V	4		
f_T	Current-Gain—Bandwidth Product	I_C= 1A; V_{CE}= 10V; f_{test}= 1.0MHz	4		MHz