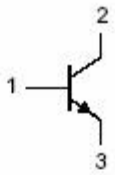
SPTECH Silicon NPN Power Transistor

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 100V(Min)
- Low Saturation Voltage
- Complement to Type BD802



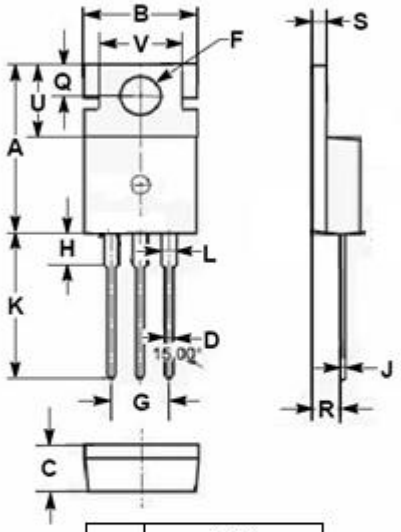
1 2 3



PIN 1. BASE
2.COLLECTOR
3. EMITTER
TO-220C package

APPLICATIONS

- Designed for a wide variety of medium-power switching and amplifier applications , such as series and shunt regulators and driver and output stages of high-fidelity amplifiers.



DIM	mm MIN	MAX
A	15.50	15.90
B	9.90	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	13.00	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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	5	V
I_C	Collector Current-Continuous	8	A
I_B	Base Current-Continuous	3	A
P_C	Collector Power Dissipation T_C=25℃	65	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Ttemperature Range	-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.92	℃/W

SPTECH Silicon NPN Power Transistor

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	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= 3A; I_B= 0.3A			1	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 3A ; V_{CE}= 2V			1.6	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 100V; I_E= 0			0.1	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			1	mA
h_{FE-1}	DC Current Gain	I_C= 1A ; V_{CE}= 2V	30			
h_{FE-2}	DC Current Gain	I_C= 3A ; V_{CE}= 2V	15			
f_T	Current-Gain—Bandwidth Product	I_C= 0.25A ;V_{CE}= 10V,f_{test}= 1MHz	3			MHz