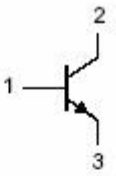
SPTECH Silicon NPN Power Transistor



1 2 3



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

DESCRIPTION

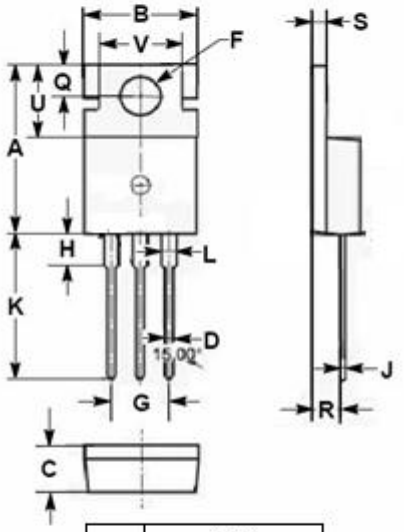
- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 80V(Min.)
- Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 1.6V(Max.) @I_C= 5A
- High Speed Switching

APPLICATIONS

- Designed for power amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CES}	Collector-Emitter Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Peak	10	A
P_C	Collector Power Dissipation @ T_C=25℃	40	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



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

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; L= 25mH	80			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 1mA; I_C= 0	6			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 1A			1.6	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 5A; V_{CE}= 4V			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 150V; I_E= 0			1	mA
h_{FE}	DC Current Gain	I_C= 5A; V_{CE}= 4V	14			
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A; V_{CE}= 10V		40		MHz
t_f	Fall Time	I_C= 5A, I_{B1}= 0.8A; V_{EB}= 5V			1	μs