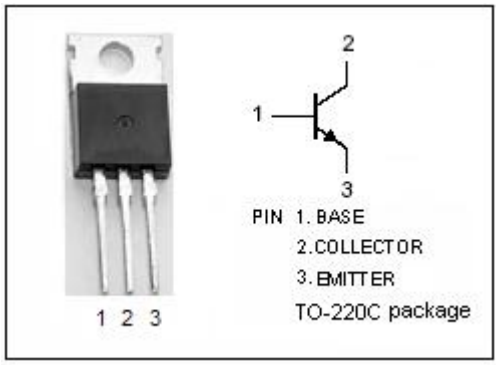
SPTECH Silicon NPN Power Transistor

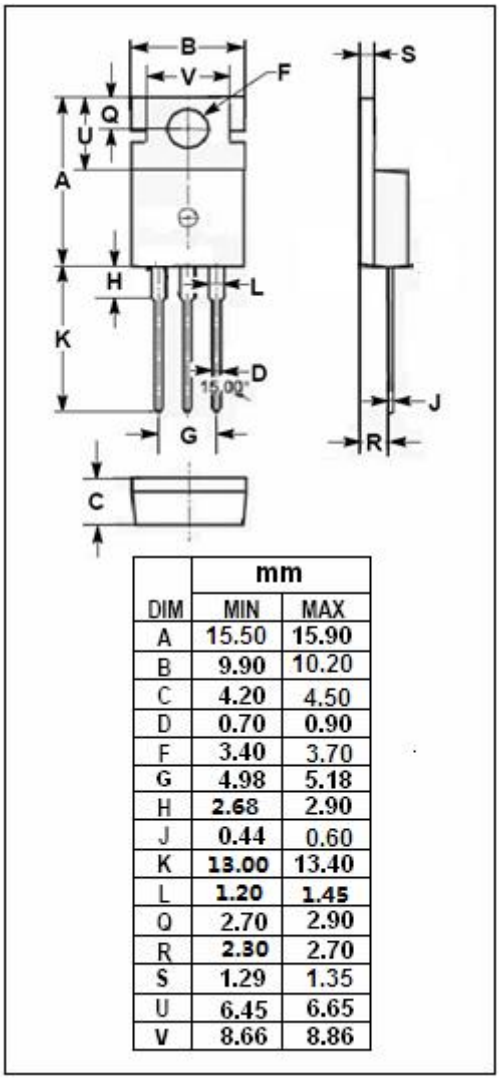
DESCRIPTION

- High Collector-Emitter Sustaining Voltage-
  : $V_{CEO(sus)}$= 400V(Min)
- High Switching Speed
- Wide Area of Safe Operation



APPLICATIONS

- Switching regulators
- Motor controls
- Ultrasonic generators
- Class C and D amplifiers
- Deflection circuits



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	450	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base voltage	7	V
I_C	Collector Current-Continuous	2	A
I_{CM}	Collector Current-Peak	4	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ T_C=25℃	15	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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= 0.5A; R_{BE}= ∞	400			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1 mA; I_E= 0	450			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 50 μ A; I_C= 0	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 0.5A; I_B= 0.1A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 0.5A; I_B= 0.1A			1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 400V; I_E= 0 V_{CB}= 400V; I_E= 0; T_C= 100℃			10 500	μ A
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0			10	μ A
h_{FE-1}	DC Current Gain	I_C= 0.1A; V_{CE}= 5V	20		80	
h_{FE-2}	DC Current Gain	I_C= 0.5A; V_{CE}= 5V	10			
f_T	Current-Gain—Bandwidth Product	I_C= 0.2A; V_{CE}= 10V		28		MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1.0MHz		25		pF