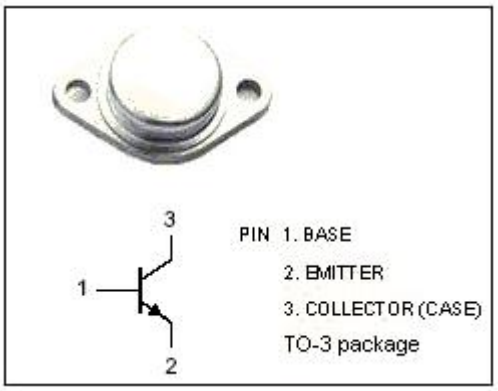
SPTECH Silicon NPN Power Transistor

DESCRIPTION

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

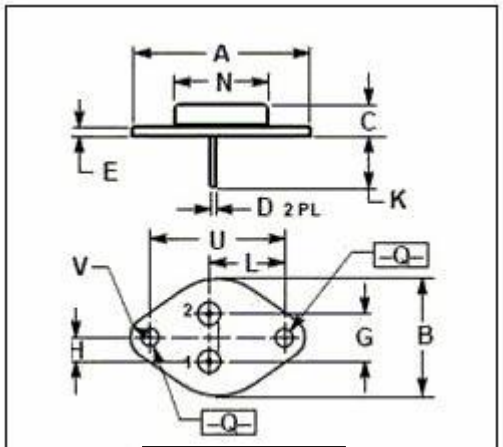


APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	600	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base voltage	7	V
I_C	Collector Current-Continuous	30	A
I_{CM}	Collector Current-Peak	50	A
I_B	Base Current-Continuous	10	A
P_C	Collector Power Dissipation @ T_C=25℃	200	W
T_J	Junction Temperature	175	℃
T_{stg}	Storage Temperature Range	-65~175	℃



DIM	mm	
	MIN	MAX
A	39.00	41.00
B	25.30	26.00
C	9.50	11.00
D	0.90	1.10
E	2.50	3.50
G	10.92	
H	5.46	
K	11.50	12.00
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.40
V	4.30	4.50

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; R_{BE}= ∞	400			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1 mA; I_E= 0	600			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 1mA; I_C= 0	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 20A; I_B= 4A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 20A; I_B= 4A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 500V; I_E= 0 V_{CB}= 500V; I_E= 0; T_C= 100℃			0.1 2.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0			100	μA
h_{FE}	DC Current Gain	I_C= 20A; V_{CE}= 5V	10		40	
f_T	Current-Gain—Bandwidth Product	I_C= 4A; V_{CE}= 10V	15			MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1.0MHz		420		pF

Switching times

t_r	Rise Time	I_C= 20A, I_{B1}= -I_{B2}= 4A; V_{CC}= 150V			0.5	μs
t_{stg}	Storage Time				3.0	μs
t_f	Fall Time				0.3	μs