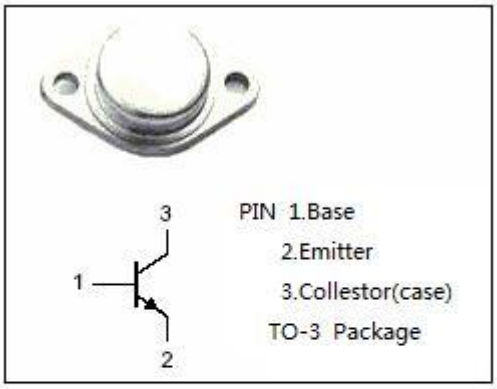
SPTECH Silicon NPN Power Transistors

DESCRIPTION

- High Voltage Capability
- Fast Switching Speed
- Low Saturation Voltage



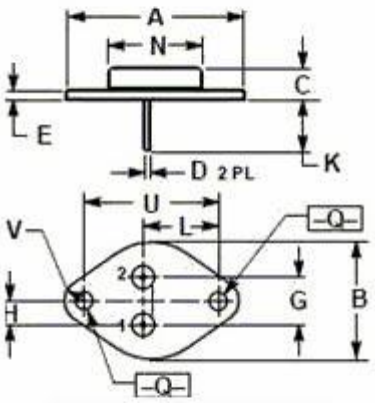
APPLICATIONS

Designed for high voltage switching applications such as:

- Off-line power supplies
- Converter circuits
- PWM regulators

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage	650	V
V_{CEX}	Collector-Emitter Voltage	450	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	8.0	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	20	A
I_B	Base Current-Continuous	5.0	A
P_C	Collector Power Dissipation@T_C=25℃	175	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃



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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.0	℃/W

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	400		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 15A; I_B= 3.0A		1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 15A; I_B= 3.0A		1.5	V
I_{EBO}	Emitter Cutoff Current	V_{EB}= 8.0V; I_C=0		2.0	mA
h_{FE}	DC Current Gain	I_C= 15A ; V_{CE}= 3V	8.0		
f_T	Current Gain-Bandwidth Product	I_C= 1.0A ; V_{CE}= 10V; f_{test}=5.0MHz	3.0		MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}=0.1MHz		500	pF
Switching times					
t_d	Delay Time	I_C= 15A , V_{CC}= 200V,I_{B1}= -I_{B2}= 3A, t_p=20 μ s, Duty Cycle≤2.0% V_{BB}=6V, R_L=13.5Ω		0.2	μ s
t_r	Rise Time			0.6	μ s
t_s	Storage Time			2.5	μ s
t_f	Fall Time			0.6	μ s