SPTECH Silicon NPN Power Transistor

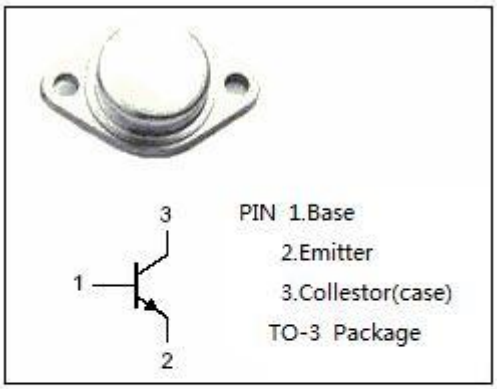
DESCRIPTION

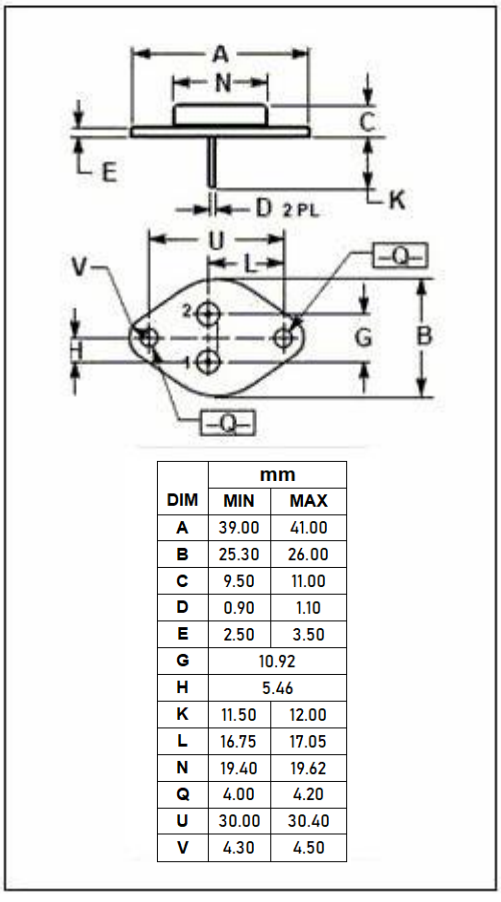
- High Voltage Capability
- High Current Capability
- Fast Switching Speed

APPLICATIONS

Designed for high-voltage,high-speed, power switching in inductive circuits where fall time is critical. They are particularly suited for line-operated swtchmode applications such as:

- Switching regulators
- Inverters
- Solenoid and relay drivers
- Motor controls
- Deflection circuits





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

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEX}	Collector-Emitter Voltage (V_{BE}= -1.5V)	1000	V
V_{CEO}	Collector-Emitter Voltage	450	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	15	A
I_{CM}	Collector Current-Peak	30	A
I_B	Base Current-Continuous	4	A
I_{BM}	Base Current-peak	20	A
P_C	Collector Power Dissipation @T_C=25℃	175	W
T_j	Junction Temperature	200	℃
T_{stg}	Storage Temperature Range	-65~200	℃

THERMAL CHARACTERISTICS

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

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 20mA ; I_B= 0	450		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 50mA; I_C= 0	7		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 8A; I_B= 1.6A I_C= 8A; I_B= 1.6A;T_C= 100℃		1.5 2.0	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 12A ;I_B= 2.4A		5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 8A; I_B= 1.6A I_C= 8A; I_B= 1.6A;T_C= 100℃		1.6 1.6	V
I_{CBO}	Collector Cutoff Current	V_{CE}=1000V; I_E= 0 V_{CE}=100V; I_E= 0;T_C=125℃		0.2 2	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0		0.1	mA
h_{FE}	DC Current Gain	I_C= 8A ; V_{CE}= 5V	8		
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V,f_{test}= 1MHz		350	pF