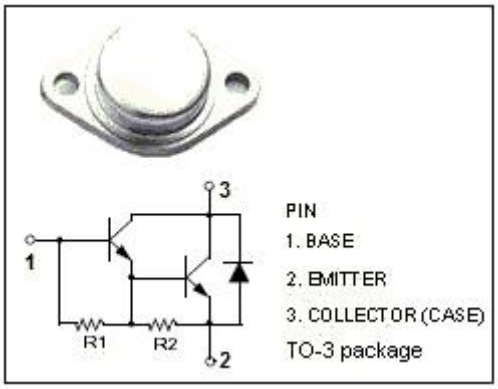
SPTECH Silicon NPN Power Transistor

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$ = 400V(Min)

APPLICATIONS

- Designed for automotive ignition applications and inverter circuits for motor control.

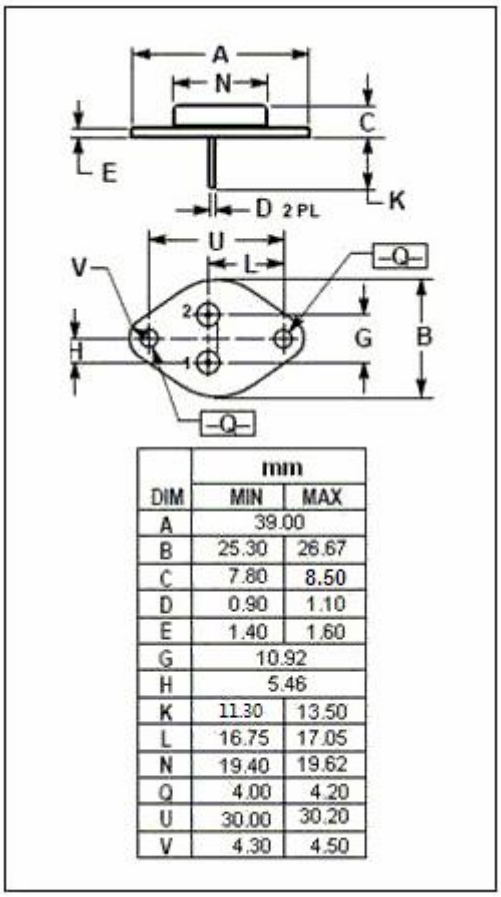


ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage V_{BE}= 0	450	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	10	A
I_{CM}	Collector Current-peak	15	A
I_B	Base Current	5	A
P_C	Collector Power Dissipation @T_C=25℃	120	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance, Junction to Case	1.2	℃/W



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	7.80	8.50
D	0.90	1.10
E	1.40	1.60
G	10.92	
H	5.46	
K	11.30	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C=50mA; I_B= 0	400			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 50mA			1.8	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 7A; I_B= 140mA			1.8	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 5A; I_B= 50mA			2.2	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 7A; I_B= 140mA			2.5	V
I_{CES}	Collector Cutoff Current	V_{CE}= 450V;V_{BE}= 0 V_{CE}= 450V;V_{BE}= 0;T_j= 150℃			0.25 0.5	mA
I_{CEO}	Collector Cutoff Current	V_{CE}= 400V; I_B= 0			0.25	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			50	mA
V_{ECF}	C-E Diode Forward Voltage	I_F= 7A			2.5	V