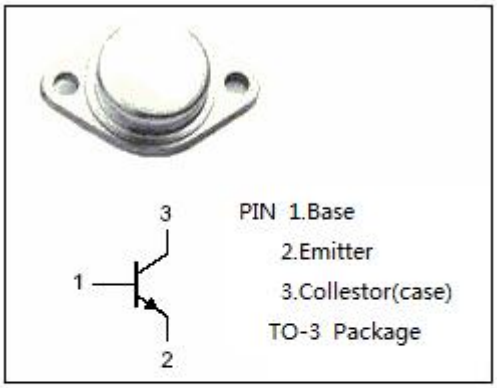
SPTECH Silicon NPN Power Transistor 2N6687

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
  : $V_{CEO(SUS)}$= 180V(Min.)
- Fast Switching Speed
- Low Collector Saturation Voltage-
  : $V_{CE(sat)}$= 1.5V(Max.)@ I_C= 25A

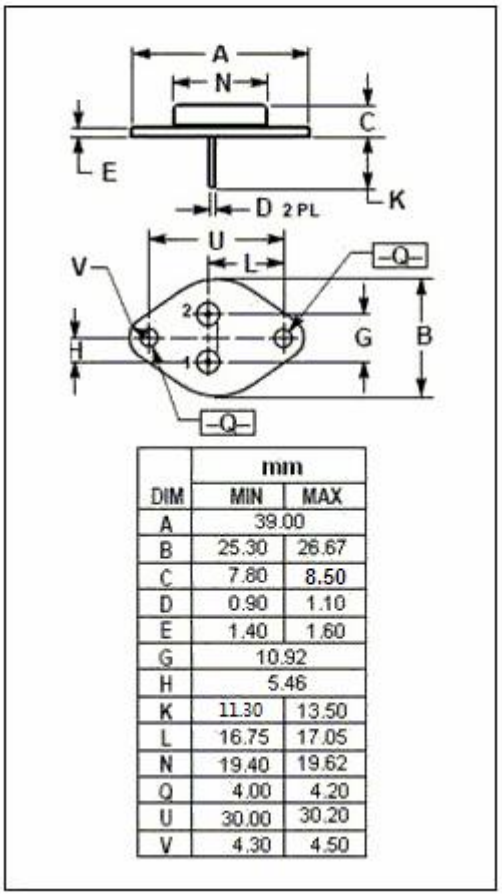


APPLICATIONS

- Designed for converters, inverters, pulse-width- modulated regulators and a variety of power switching circuits.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CEV}	Collector-Emitter Voltage	280	V
V_{CEX}	Collector-Emitter Voltage	230	V
V_{CEO}	Collector-Emitter Voltage	180	V
V_{EBO}	Emitter-Base Voltage	8	V
I_C	Collector Current-Continuous	25	A
I_{CM}	Collector Current-Peak	50	A
I_B	Base Current-Continuous	8	A
P_C	Collector Power Dissipation@T_C=25℃	200	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~150	℃



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

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	0.875	℃/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= 50mA; I_B= 0	180		V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 25A; I_B= 2.5A		1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 25A; I_B= 2.5A		1.8	V
I_{CEV}	Collector Cutoff Current	V_{CE}= 280V; V_{BE}= -1.5V V_{CE}= 280V; V_{BE}= -1.5V; T_C= 125℃		50 500	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 8V; I_C= 0		0.1	mA
h_{FE-1}	DC Current Gain	I_C= 1A; V_{CE}= 2V	30		
h_{FE-2}	DC Current Gain	I_C= 10A; V_{CE}= 2V	25	100	
h_{FE-3}	DC Current Gain	I_C= 25A; V_{CE}= 2V	15		
C_{OB}	Collector Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 0.1MHz	300	650	pF
f_T	Current Gain-Bandwidth Product	I_C= 1A; V_{CE}= 10V	20	100	MHz
Switching times					
t_d	Delay Time	V_{CC}= 80V; I_C= 25A; I_{B1}= -I_{B2}= 2.5A, t_p= 20 μs; V_{BE}= -4V		0.1	μs
t_r	Rise Time			0.6	μs
t_s	Storage Time			1.5	μs
t_f	Fall Time			0.25	μs