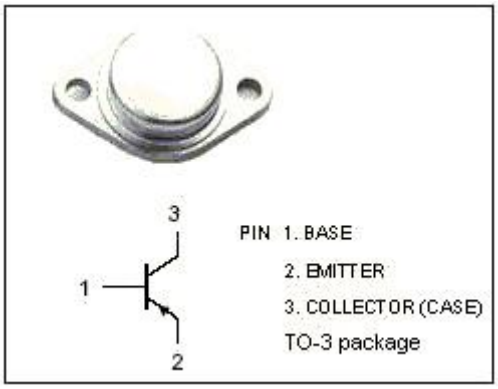
SPTECH Silicon PNP Power Transistor

DESCRIPTION

- Excellent Safe Operating Area
- DC Current Gain-
  : h_{FE}= 20-70@I_C = -4A,V_{CE}= -4V
- Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= -1.1 V(Max)@ I_C = -4A
- Complement to the NPN MJ15015

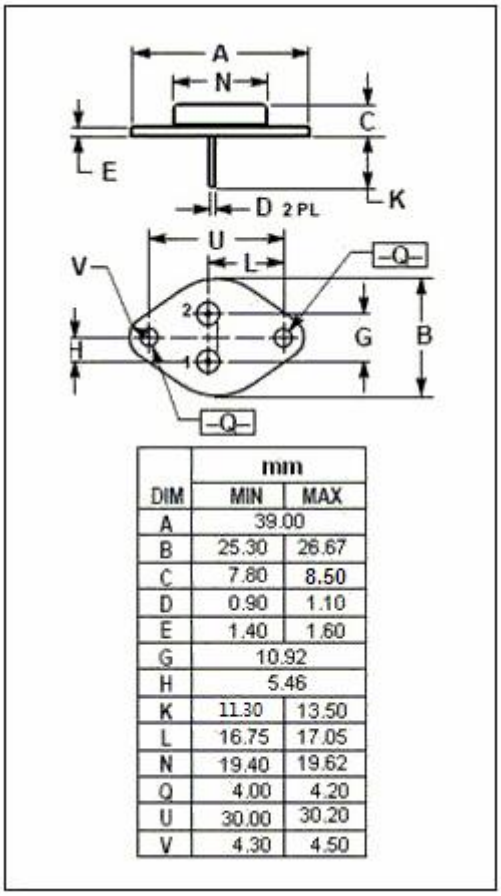


APPLICATIONS

- Designed for high power audio, stepping motor and other linear applications, and can also be used in power switching circuits such as relay or solenoid drivers, DC-DC converters,inverters and etc.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	-200	V
V_{CEO}	Collector-Emitter Voltage	-120	V
V_{EBO}	Emitter-Base Voltage	-7	V
I_C	Collector Current-Continuous	-15	A
I_B	Base Current	-7	A
P_D	Total Power Dissipation@T_C=25℃	180	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-65~200	℃



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	0.98	℃/W

SPTECH Silicon PNP Power Transistor

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	-120		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= -4A; I_B= -0.4A		-1.1	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= -10A; I_B= -3.3A		-3.0	V
$V_{CE(sat)-3}$	Collector-Emitter Saturation Voltage	I_C= -15A; I_B= -7.0A		-5.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= -4A ; V_{CE}= -4V		-1.8	V
I_{CEO}	Collector Cutoff Current	V_{CE}= -60V; $V_{BE(OFF)}$= 0		-0.1	mA
I_{CBO}	Collector Cutoff Current	V_{CE}=200;I_E=0 V_{CE}=200;I_E=0;T_C=150℃		-1 -5	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= -7V; I_C=0		-0.2	mA
h_{FE-1}	DC Current Gain	I_C= -4A ; V_{CE}= -2V	10	70	
h_{FE-2}	DC Current Gain	I_C= -4A ; V_{CE}= -4V	20	70	
h_{FE-3}	DC Current Gain	I_C= -10A ; V_{CE}= -4V	5		
$I_{s/b}$	Second Breakdown Collector Current with Base Forward Biased	V_{CE}= -60V, t= 0.5 s,Nonrepetitive	-3		A
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= -10V; f_{test}= 1.0MHz	300		pF
f_T	Current-Gain—Bandwidth Product	I_C= -1A ; V_{CE}= -4V; f_{test}= 1.0MHz	2.2		MHz