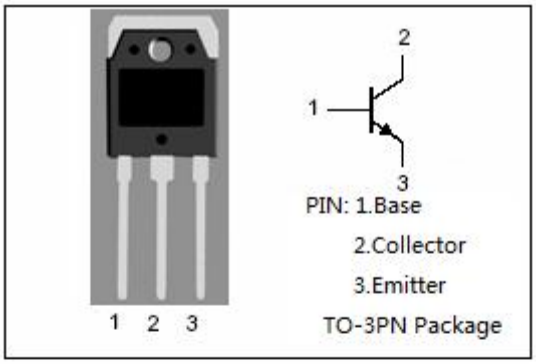
SPTECH Silicon NPN Power Transistor



DESCRIPTION

- Excellent Safe Operating Area
- DC Current Gain-
  : h_{FE}=20-70@I_C = 4A
- Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 1.1 V(Max)@ I_C = 4A
- Complement to Type TIP2955

APPLICATIONS

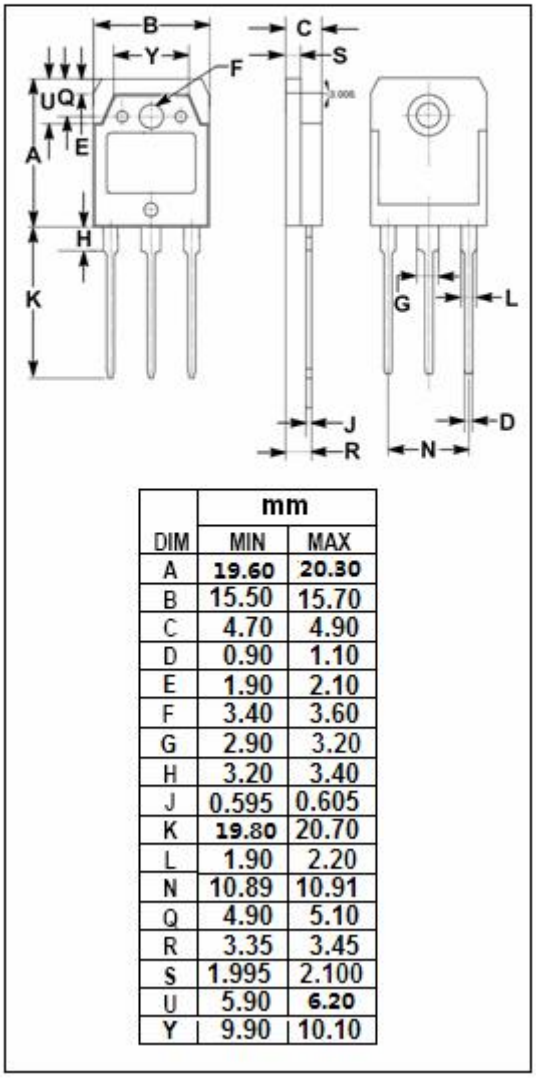
- Designed for general-purpose switching and amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-base Voltage	7	V
I_C	Collector Current-Continuous	15	A
I_B	Base Current	7	A
P_C	Collector Power Dissipation@T_C=25℃	90	W
T_j	Junction Tmperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.39	℃/W
$R_{th\ j\text{-}a}$	Thermal Resistance,Junction to Ambient	35.7	℃/W



DIM	mm MIN	MAX
A	19.60	20.30
B	15.50	15.70
C	4.70	4.90
D	0.90	1.10
E	1.90	2.10
F	3.40	3.60
G	2.90	3.20
H	3.20	3.40
J	0.595	0.605
K	19.80	20.70
L	1.90	2.20
N	10.89	10.91
Q	4.90	5.10
R	3.35	3.45
S	1.995	2.100
U	5.90	6.20
Y	9.90	10.10

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= 30mA ;I_B= 0	60		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
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 4A ; V_{CE}= 4V		1.8	V
I_{CEO}	Collector Cutoff Current	V_{CE}= 30V; I_B=0		0.7	mA
I_{CBO}	Collector Cutoff Current	V_{CB}= 100V; I_E=0		1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0		5.0	mA
h_{FE-1}	DC Current Gain	I_C= 4A ; V_{CE}= 4V	20	70	
h_{FE-2}	DC Current Gain	I_C= 10A ; V_{CE}= 4V	5		
$I_{s/b}$	Second Breakdown Collector Current with Base Forward Biased	V_{CE}= 30V,t= 1.0s,Nonrepetitive	3.0		A
f_T	Current-Gain—Bandwidth Product	I_C= 0.5A ; V_{CE}= 10V;f_{test}= 1.0MHz	2.5		MHz