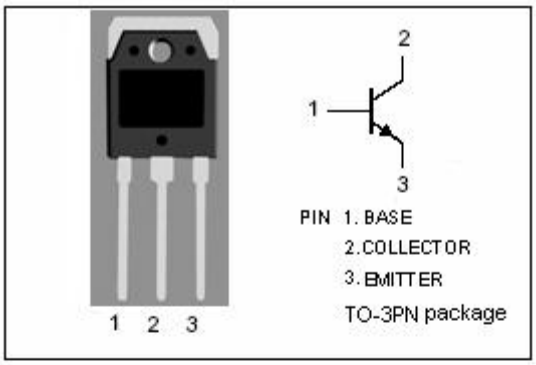
SPTECH Silicon NPN Power Transistor



DESCRIPTION

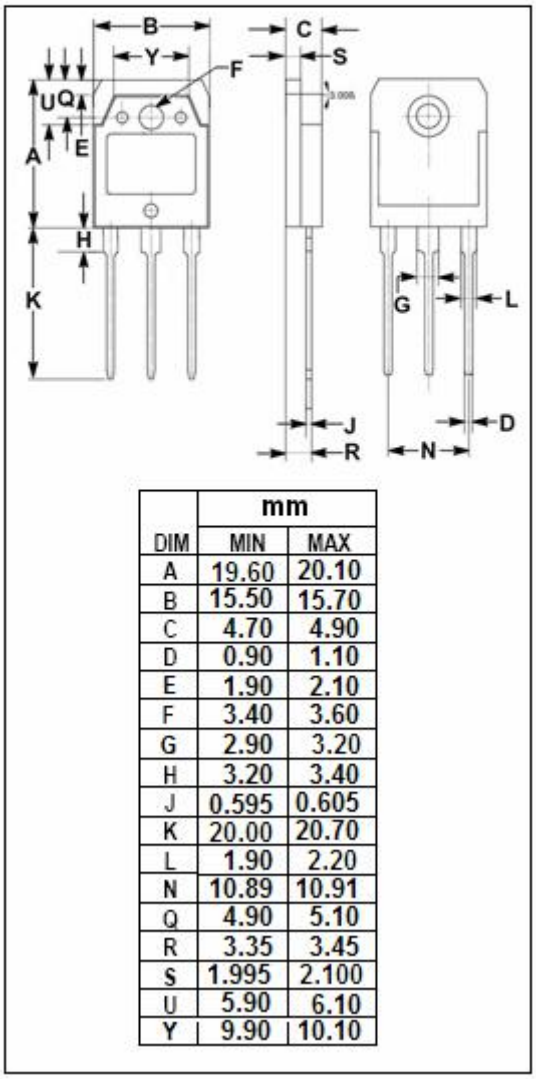
- High Collector-Emitter Breakdown Voltage-
  $V_{(BR)CEO}$= 150V(Min)
- Good Linearity of h_{FE}
- Complement to Type 2SA1303

APPLICATIONS

- Designed for audio and general purpose applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	150	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	14	A
I_B	Base Current-Continuous	3	A
P_C	Collector Power Dissipation @ T_C=25℃	125	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	19.60	20.10
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	20.00	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	6.10
Y	9.90	10.10

SPTECH Silicon NPN Power Transistor

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 25mA ; I_B= 0	150			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 5A; I_B= 0.5A			2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 150V ; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			100	μA
h_{FE}	DC Current Gain	I_C= 5A ; V_{CE}= 4V	50		180	
C_{OB}	Output Capacitance	I_E= 0 ; V_{CB}= 10V;f= 1.0MHz		200		pF
f_T	Current-Gain—Bandwidth Product	I_E= -2A ; V_{CE}= 12V	25			MHz

Switching Times

t_{on}	Turn-on Time	I_C= 5A ,R_L= 12Ω , I_{B1}= -I_{B2}= 0.5A,V_{CC}= 60V		0.2		μs
t_{stg}	Storage Time			1.5		μs
t_f	Fall Time			0.35		μs

◆ h_{FE} Classifications

O	P	Y
50-100	70-140	90-180