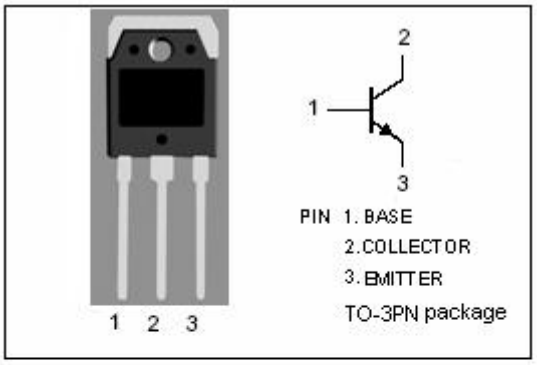
SPTECH Silicon NPN Power Transistor



DESCRIPTION

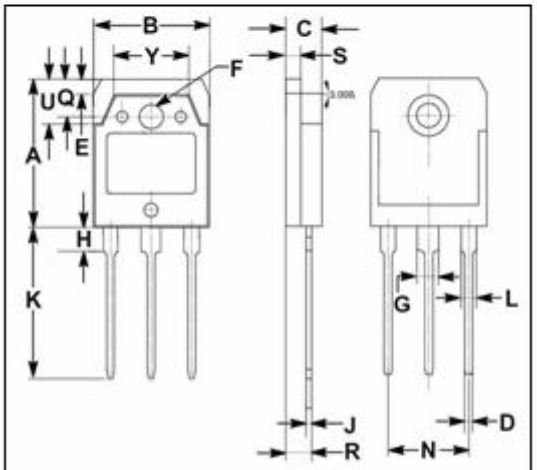
- Collector-Emitter Breakdown Voltage
  : $V_{(BR)CEO}$= 140V(Min)
- Good Linearity of h_{FE}
- Complement to Type 2SA1227

APPLICATIONS

- For audio frequency power amplifier applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	140	V
V_{CEO}	Collector-Emitter Voltage	140	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	12	A
I_{CM}	Collector Current-Peak	20	A
P_C	Collector Power Dissipation @ T_C=25℃	120	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
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 5.0A; I_B= 0.5A			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 5.0A; I_B= 0.5A			2.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 140V; I_E= 0			50	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 3V; I_C= 0			50	μA
h_{FE-1}	DC Current Gain	I_C= 2A; V_{CE}= 5V	60		320	
h_{FE-2}	DC Current Gain	I_C= 5A; V_{CE}= 5V	40			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f= 1.0MHz		190		pF
f_T	Current-Gain—Bandwidth Product	I_C= 1A; V_{CE}= 5V		50		MHz

◆ **h_{FE-1} Classifications**

R	Q	P
60-120	100-200	160-320