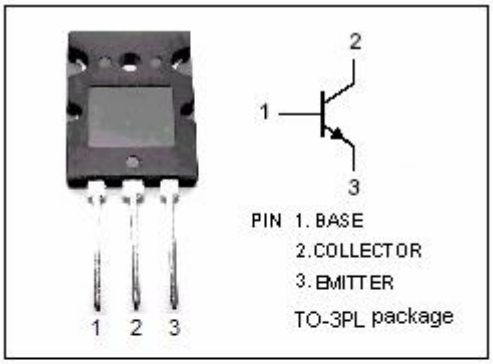
SPTECH Silicon NPN Power Transistor



DESCRIPTION

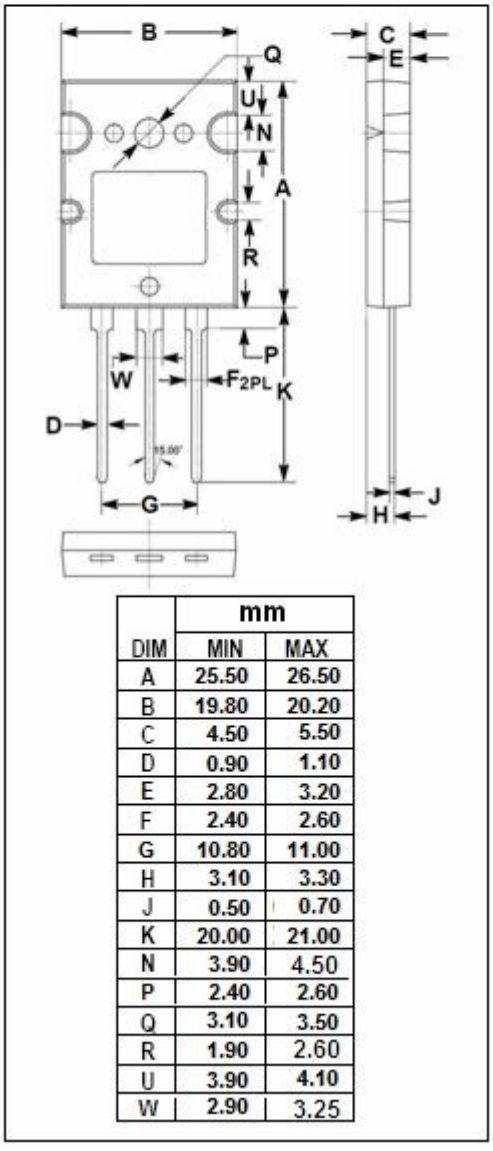
- High Current Capability
- High Power Dissipation
- High Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 230V(Min)
- Complement to Type 2SA1943

APPLICATIONS

- Power amplifier applications
- Recommend for 100W high fidelity audio frequency amplifier output stage applications

ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	230	V
V_{CEO}	Collector-Emitter Voltage	230	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	15	A
I_B	Base Current-Continuous	1.5	A
P_C	Collector Power Dissipation @ T_C=25℃	150	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	MAX
A	25.50	26.50
B	19.80	20.20
C	4.50	5.50
D	0.90	1.10
E	2.80	3.20
F	2.40	2.60
G	10.80	11.00
H	3.10	3.30
J	0.50	0.70
K	20.00	21.00
N	3.90	4.50
P	2.40	2.60
Q	3.10	3.50
R	1.90	2.60
U	3.90	4.10
W	2.90	3.25

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= 50mA ; I_B= 0	230			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 8.0A; I_B= 0.8A			3.0	V
$V_{BE(on)}$	Base-Emitter On Voltage	I_C= 7A ; V_{CE}= 5V			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 230V ; I_E= 0			5	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			5	μA
h_{FE-1}	DC Current Gain	I_C= 1A ; V_{CE}= 5V	55		160	
h_{FE-2}	DC Current Gain	I_C= 7A ; V_{CE}= 5V	35			
C_{OB}	Output Capacitance	I_E=0 ; V_{CB}= 10V;f= 1.0MHz		200		pF
f_T	Current-Gain—Bandwidth Product	I_C=1A ; V_{CE}= 5V		30		MHz

◆ **h_{FE-1} Classifications**

R	O
55-110	80-160

Typical Characteristics

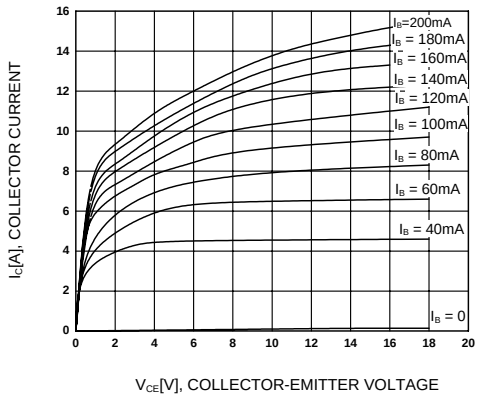


Figure 1. Static Characteristic

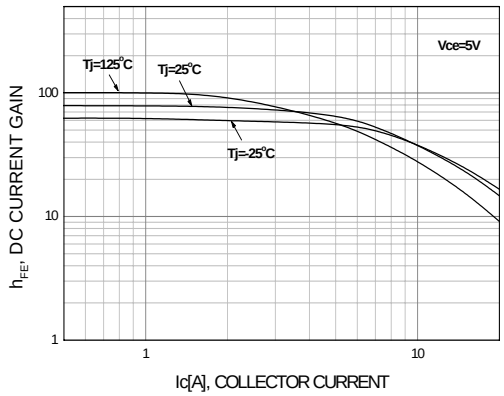


Figure 2. DC current Gain (R grade)

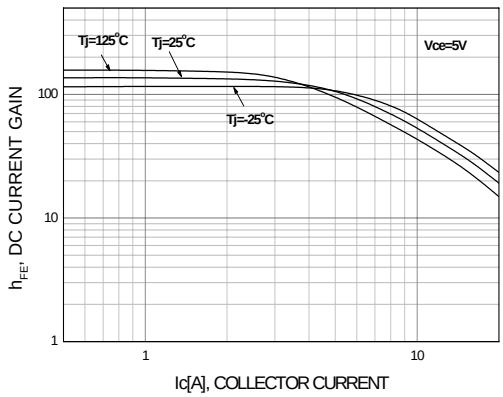


Figure 3. DC current Gain (O grade)



Figure 4. Collector-Emitter Saturation Voltage

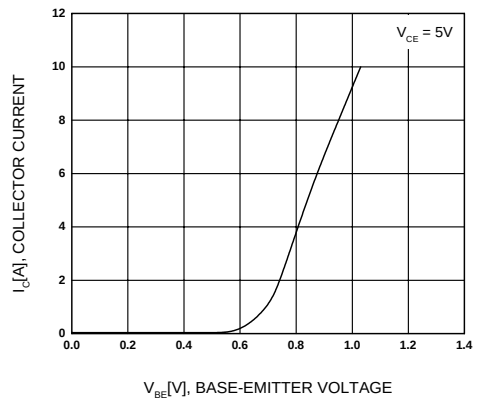


Figure 5. Base-Emitter On Voltage



Figure 6. Base-Emitter Saturation Voltage

Typical Characteristics

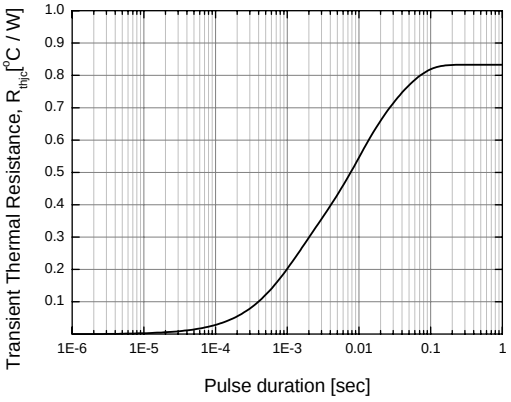


Figure 7. Power Derating

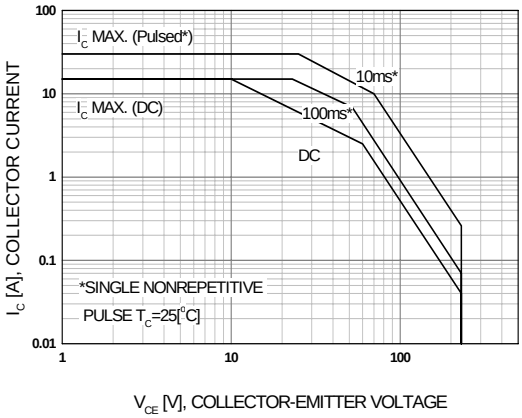


Figure 8. Safe Operating Area

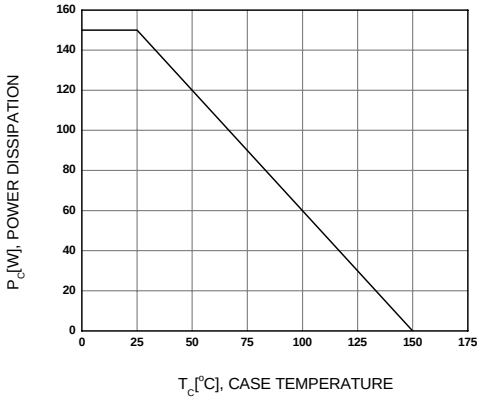


Figure 9. Power Derating