

Silicon NPN Power Transistors

2SC3181N

DESCRIPTION

- With TO-3P(I) package
- Complement to type 2SA1264N

APPLICATIONS

- Power amplifier applications
- Recommend for 55W high fidelity audio frequency amplifier output stage

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
3	Emitter

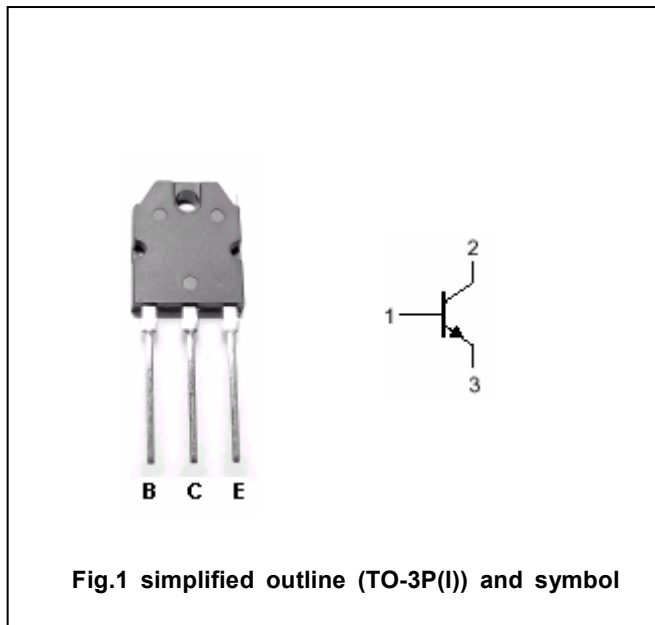


Fig.1 simplified outline (TO-3P(I)) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	120	V
V _{CEO}	Collector-emitter voltage	Open base	120	V
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		8	A
I _B	Base current		0.8	A
P _T	Total power dissipation	T _C =25°C	80	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

Silicon NPN Power Transistors

2SC3181N

CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =50mA, I _B =0	120			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =6A; I _B =0.6A			2.0	V
V _{BE}	Base-emitter voltage	I _C =4A; V _{CE} =5V			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =120V; I _E =0			5	μA
I _{EBO}	Emitter cut-off 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 =4A; V _{CE} =5V	35			
f _T	Transition frequency	I _C =1A; V _{CE} =5V		30		MHz
C _{ob}	Output capacitance	I _E =0; V _{CB} =10V; f=1MHz		190		pF

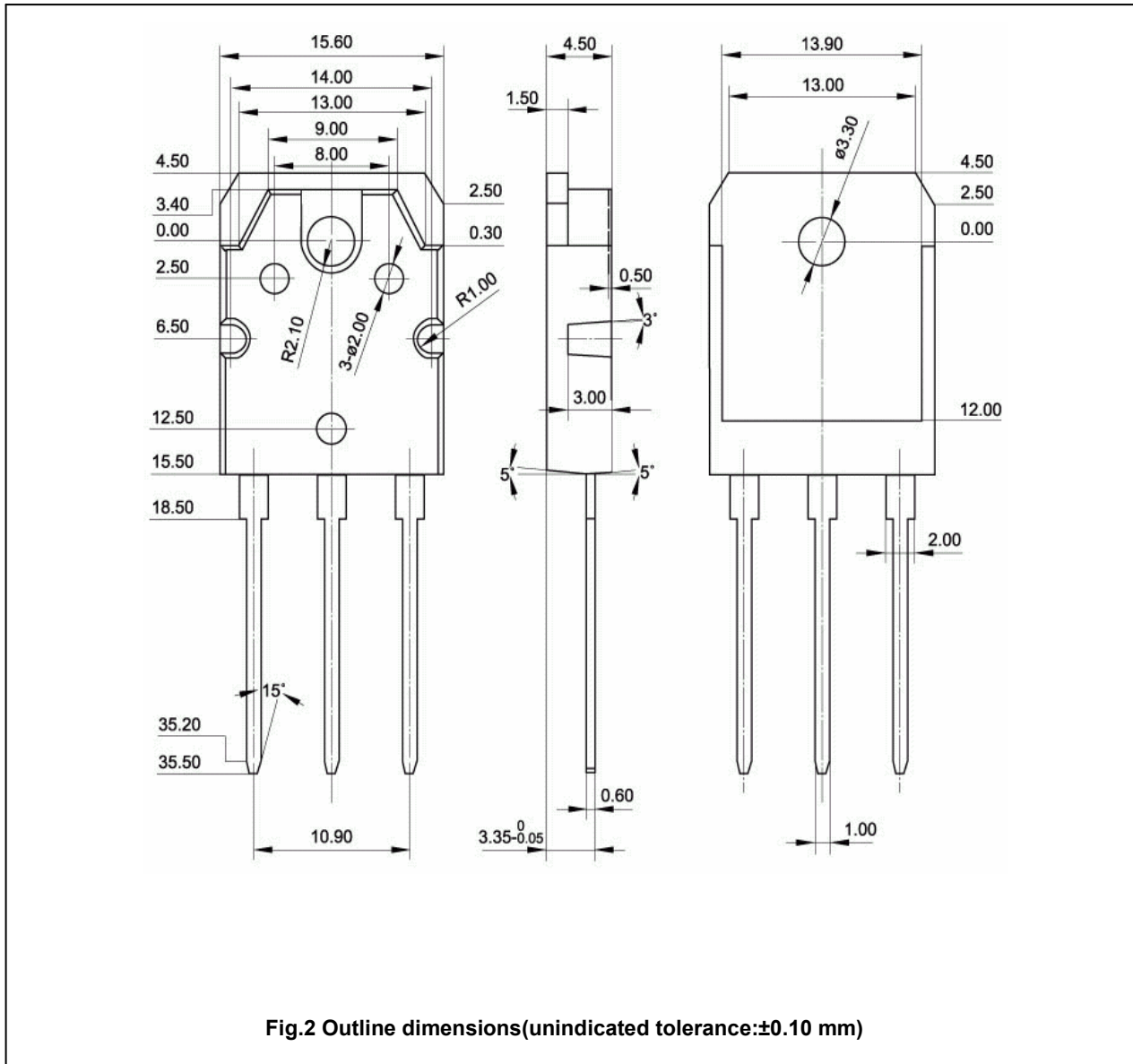
◆ h_{FE-1} Classifications

R	O
55-110	80-160

Silicon NPN Power Transistors

2SC3181N

PACKAGE OUTLINE



Silicon NPN Power Transistors

2SC3181N

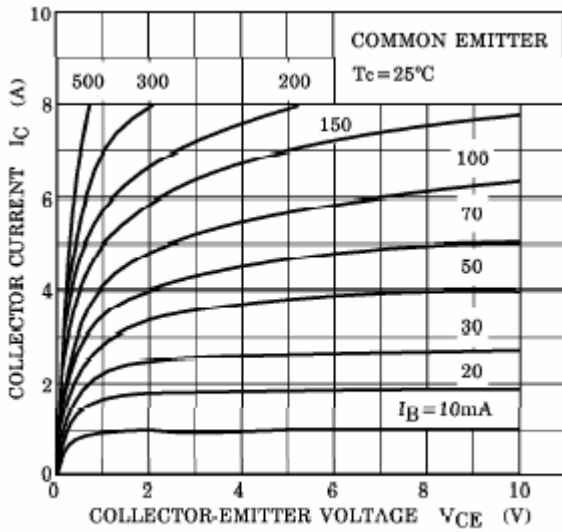


Fig.3 Static Characteristic

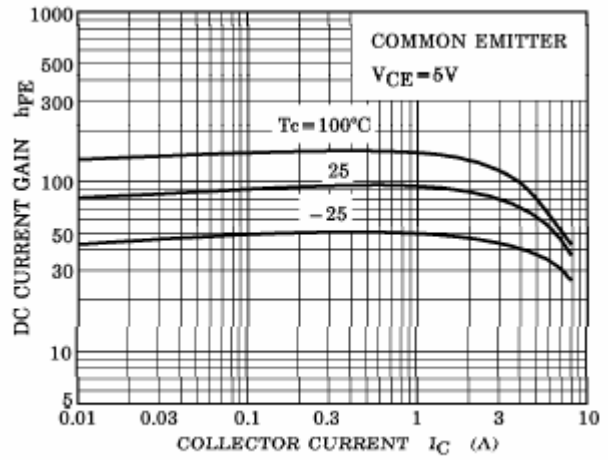


Fig.4 DC current Gain

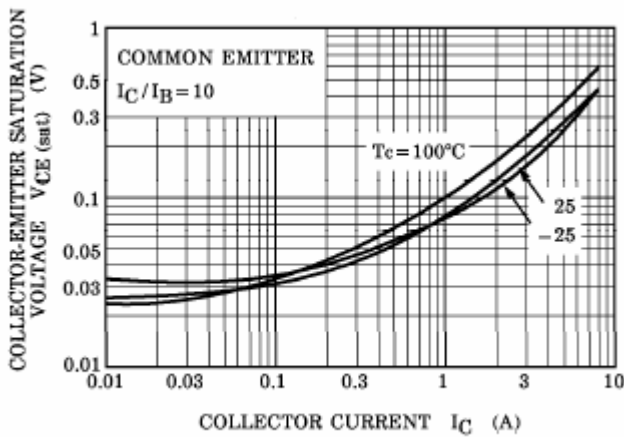


Fig.5 Collector-Emitter Saturation Voltage

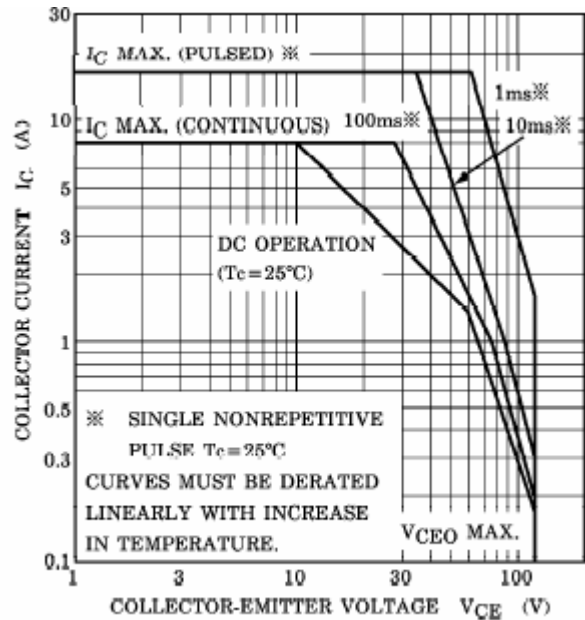


Fig.6 Safe Operating Area