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

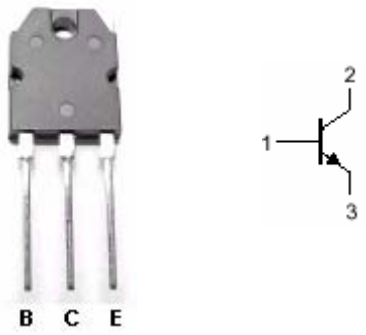

Fig.1 simplified outline (TO-3P(I)) and symbol

Absolute maximum ratings(Ta=25℃)

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℃	80	W
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-55~150	℃

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CHARACTERISTICS

Tj=25℃ 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

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PACKAGE OUTLINE

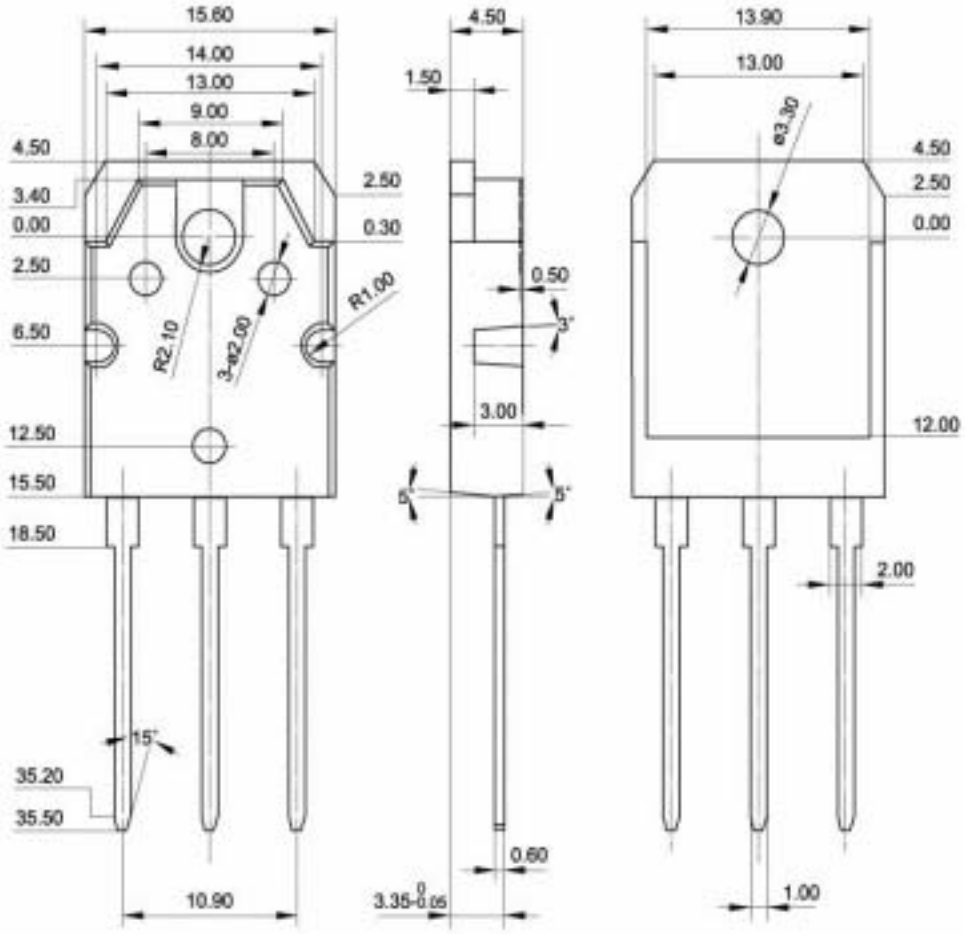

Fig.2 Outline dimensions(unindicated tolerance:±0.10 mm)

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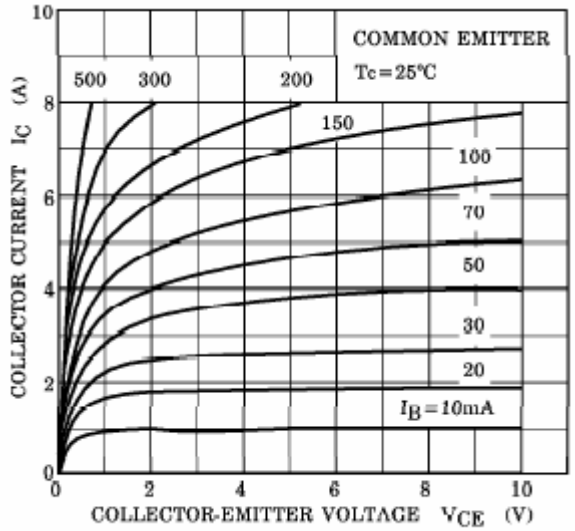

Fig.3 Static Characteristic

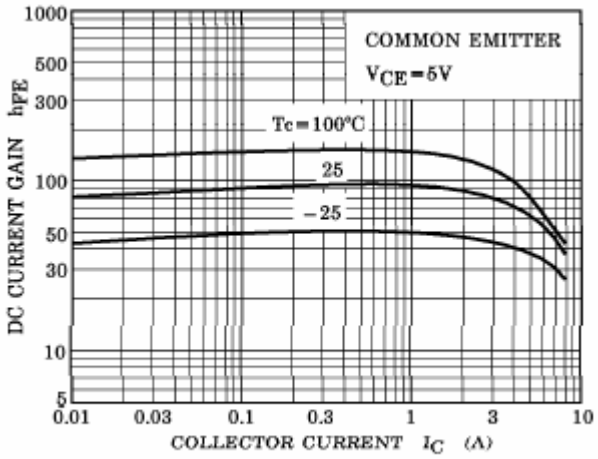

Fig.4 DC current Gain

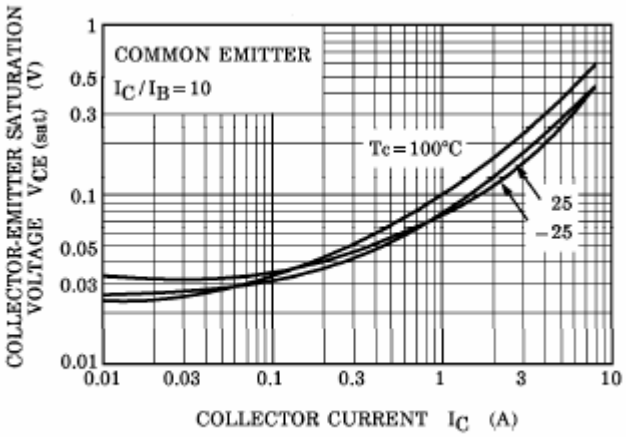

Fig.5 Collector-Emitter Saturation Voltage

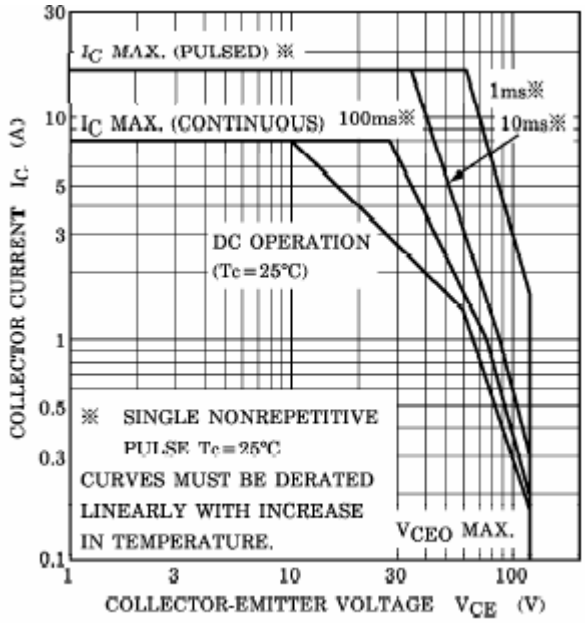

Fig.6 Safe Operating Area