Silicon NPN Power Transistors 2SD1407

DESCRIPTION

- With TO-220Fa package
- High breakdown voltage
- Low collector saturation voltage
- Complement to type 2SB1016

APPLICATIONS

- Power amplifier applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

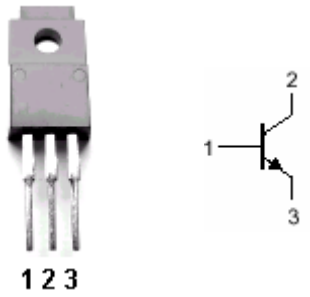

Fig.1 simplified outline (TO-220Fa) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector -emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		5	A
I_B	Base current		0.5	A
P_C	Collector power dissipation	T_C=25℃	30	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	100			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=4A; I_B=0.4A			2.0	V
V_{BE}	Base-emitter voltage	I_C=1A; V_{CE}=5V			1.5	V
I_{CBO}	Collector cut-off current	V_{CB}=100V; I_E=0			100	μA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			1.0	mA
h_{FE-1}	DC current gain	I_C=1A ; V_{CE}=5V	40		240	
h_{FE-2}	DC current gain	I_C=4A ; V_{CE}=5V	20			
f_T	Transition frequency	I_C=1A; V_{CE}=5V		12		MHz
C_{OB}	Collector output capacitance	f=1MHz ; V_{CB}=10V;I_E=0		100		pF

◆ **h_{FE-1} Classifications**

R	O	Y
40-80	70-140	120-240

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PACKAGE OUTLINE

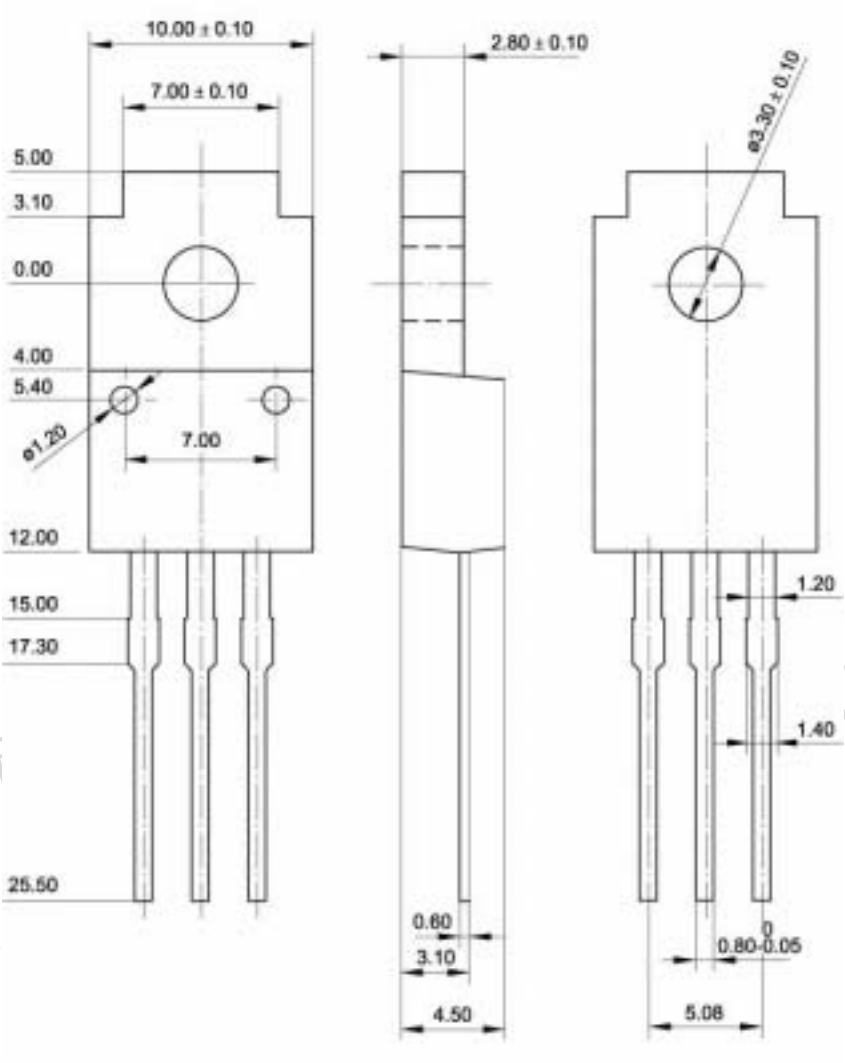

Fig.2 Outline dimensions(unindicated tolerance:±0.15 mm)

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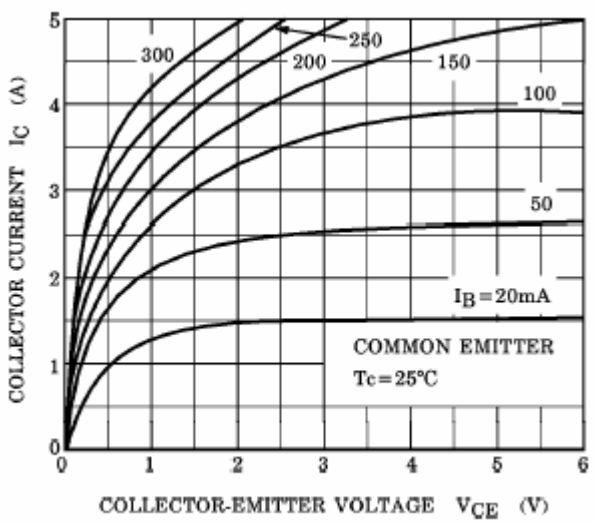

Fig.3 Static Characteristic

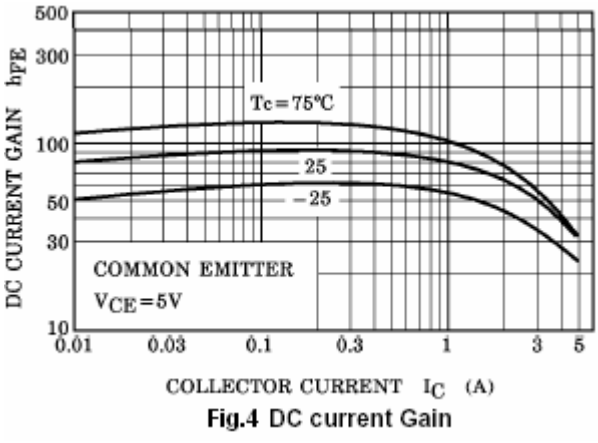

Fig.4 DC current Gain

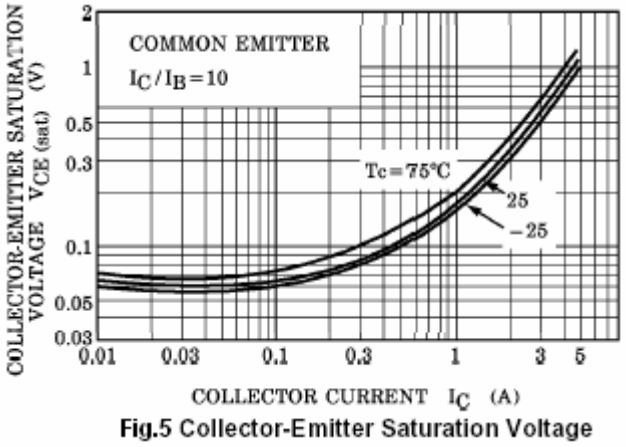

Fig.5 Collector-Emitter Saturation Voltage

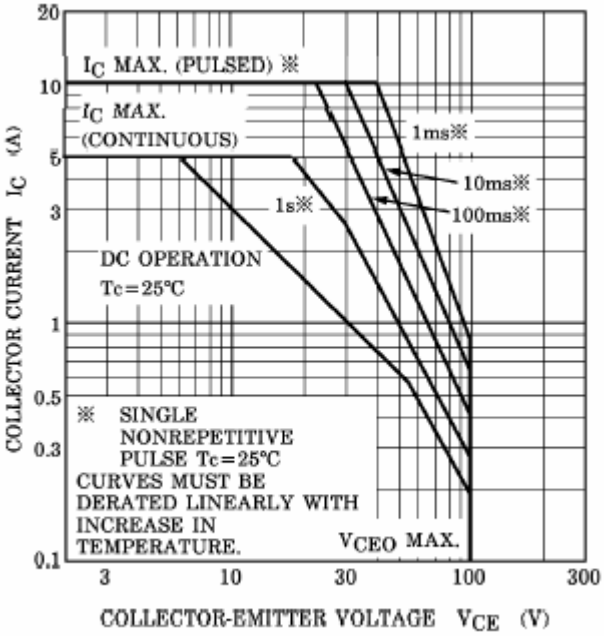

Fig.6 Safe Operating Area