

Silicon NPN Power Transistors

2SD2029

DESCRIPTION

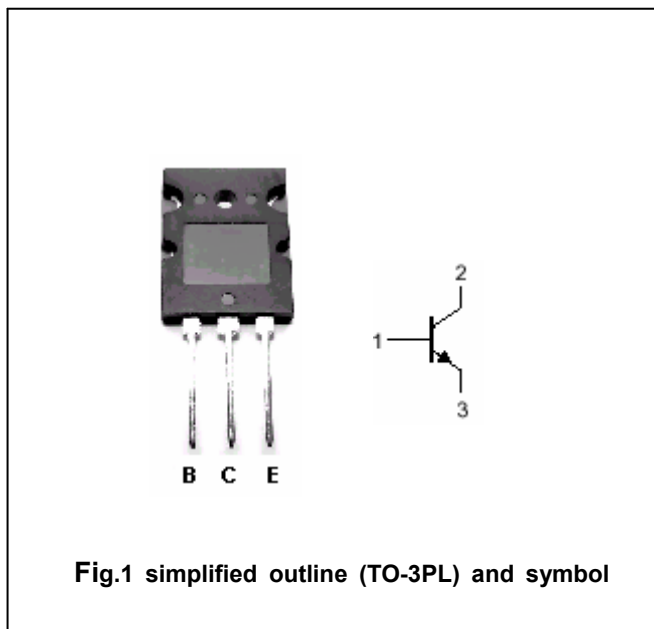
- With TO-3PL package
- Complement to type 2SB1347
- Wide area of safe operation
- High transition frequency

APPLICATIONS

- Optimum for the output stage of a Hi-Fi audio amplifier applications

PINNING

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



Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	160	V
V _{CEO}	Collector-emitter voltage	Open base	160	V
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		12	A
I _{CM}	Collector current-peak		20	A
P _C	Collector power dissipation	T _a =25°C	3.5	W
		T _C =25°C	120	
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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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	160			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =8A ; I _B =0.8A			2.0	V
V _{BE}	Base-emitter voltage	I _C =8A ; V _{CE} =5V			1.8	V
I _{CBO}	Collector cut-off current	V _{CB} =160V; I _E =0			50	μA
I _{EBO}	Emitter cut-off current	V _{EB} =3V; I _C =0			50	μA
h _{FE-1}	DC current gain	I _C =20mA ; V _{CE} =5V	20			
h _{FE-2}	DC current gain	I _C =1A ; V _{CE} =5V	60		200	
h _{FE-3}	DC current gain	I _C =8A ; V _{CE} =5V	20			
f _T	Transition frequency	I _C =0.5A ; V _{CE} =5V; f=1MHz		20		MHz
C _{OB}	Collector output capacitance	I _E =0; f=1MHz; V _{CB} =10V		210		pF

◆ h_{FE-2} classifications

Q	S	P
60-120	80-160	100-200

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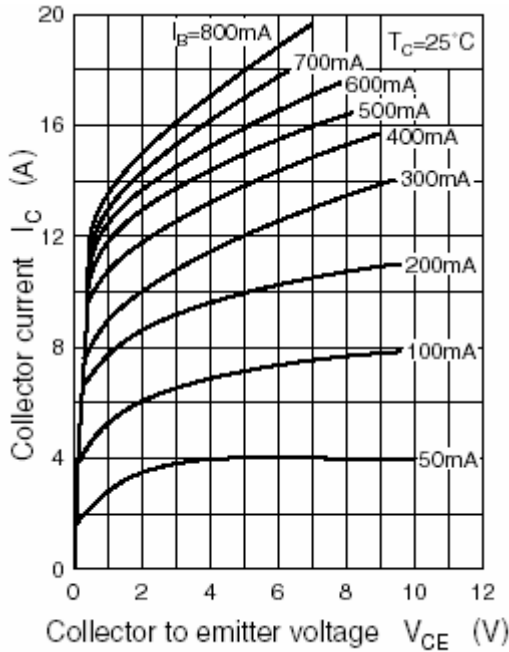


Fig.3 Static Characteristic

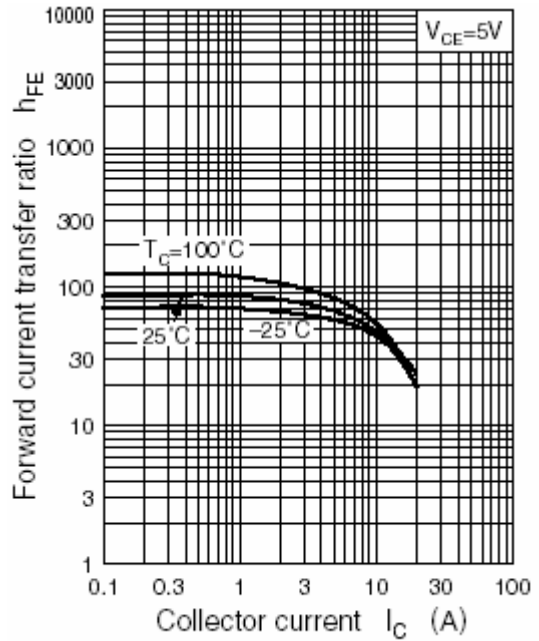


Fig.4 DC current Gain

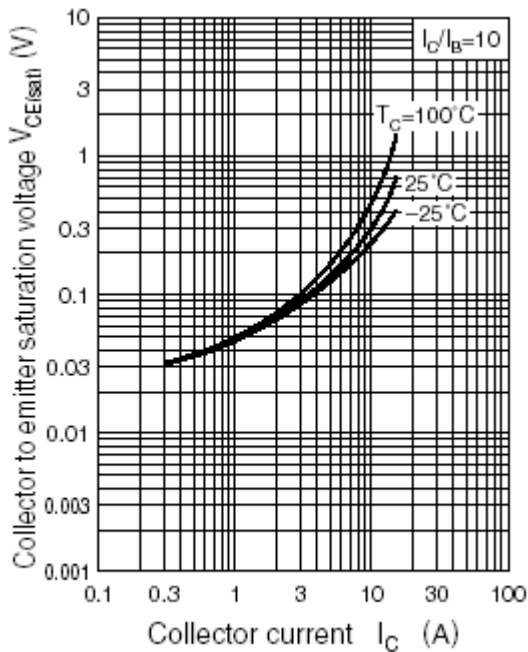


Fig.5 Collector-Emitter Saturation Voltage

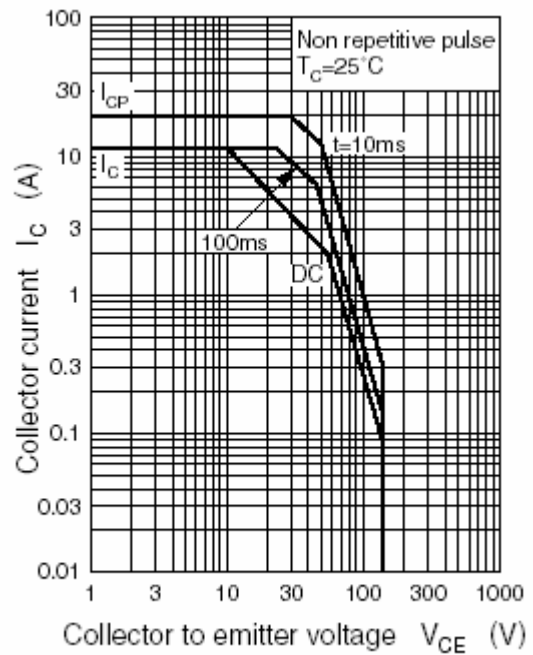


Fig.6 Safe Operating Area