

Silicon NPN Power Transistors

2SC3117

DESCRIPTION

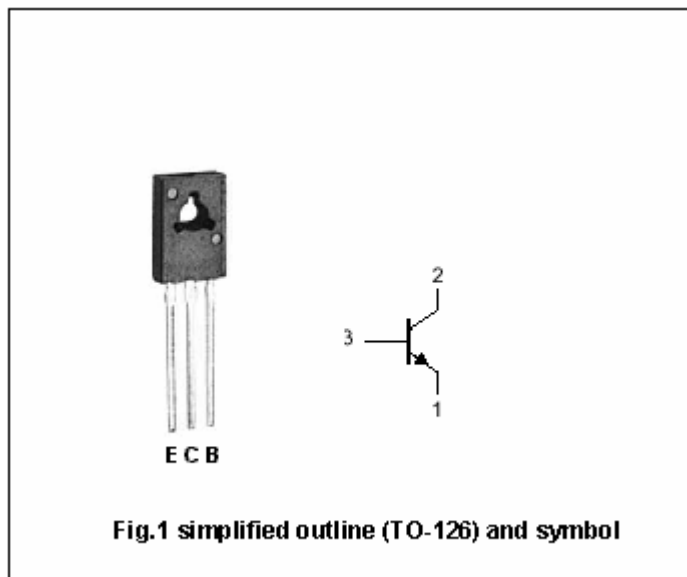
- With TO-126 package
- Complement to type 2SA1249
- High breakdown voltage
- Large current capacity

APPLICATIONS

- Color TV sound output; converters; Inverters' applications
- 160V/1.5A switching applications

PINNING

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

Absolute maximum ratings($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	180	V
V_{CEO}	Collector-emitter voltage	Open base	160	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		1.5	A
I_{CM}	Collector current-peak		2.5	A
P_C	Collector power dissipation	$T_a=25$	1.0	W
		$T_C=25$	10	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =1mA; R _{BE} =		160		V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =10 μ A; I _E =0		180		V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =10 μ A; I _C =0		6		V
V _{CEsat}	Collector-emitter saturation voltage	I _C =500mA; I _B =50mA		0.13	0.45	V
V _{BEsat}	Base-emitter saturation voltage	I _C =500mA; I _B =50mA		0.85	1.2	V
I _{CBO}	Collector cut-off current	V _{CB} =120V; I _E =0			1.0	μ A
I _{EBO}	Emitter cut-off current	V _{EB} =4V; I _C =0			1.0	μ A
h _{FE-1}	DC current gain	I _C =100mA; V _{CE} =5V	100		400	
h _{FE-2}	DC current gain	I _C =10mA; V _{CE} =5V	90			
f _T	Transition frequency	I _C =50mA; V _{CE} =10V		120		MHz
C _{ob}	Output capacitance	I _E =0; V _{CB} =10V; f=1MHz		22		pF

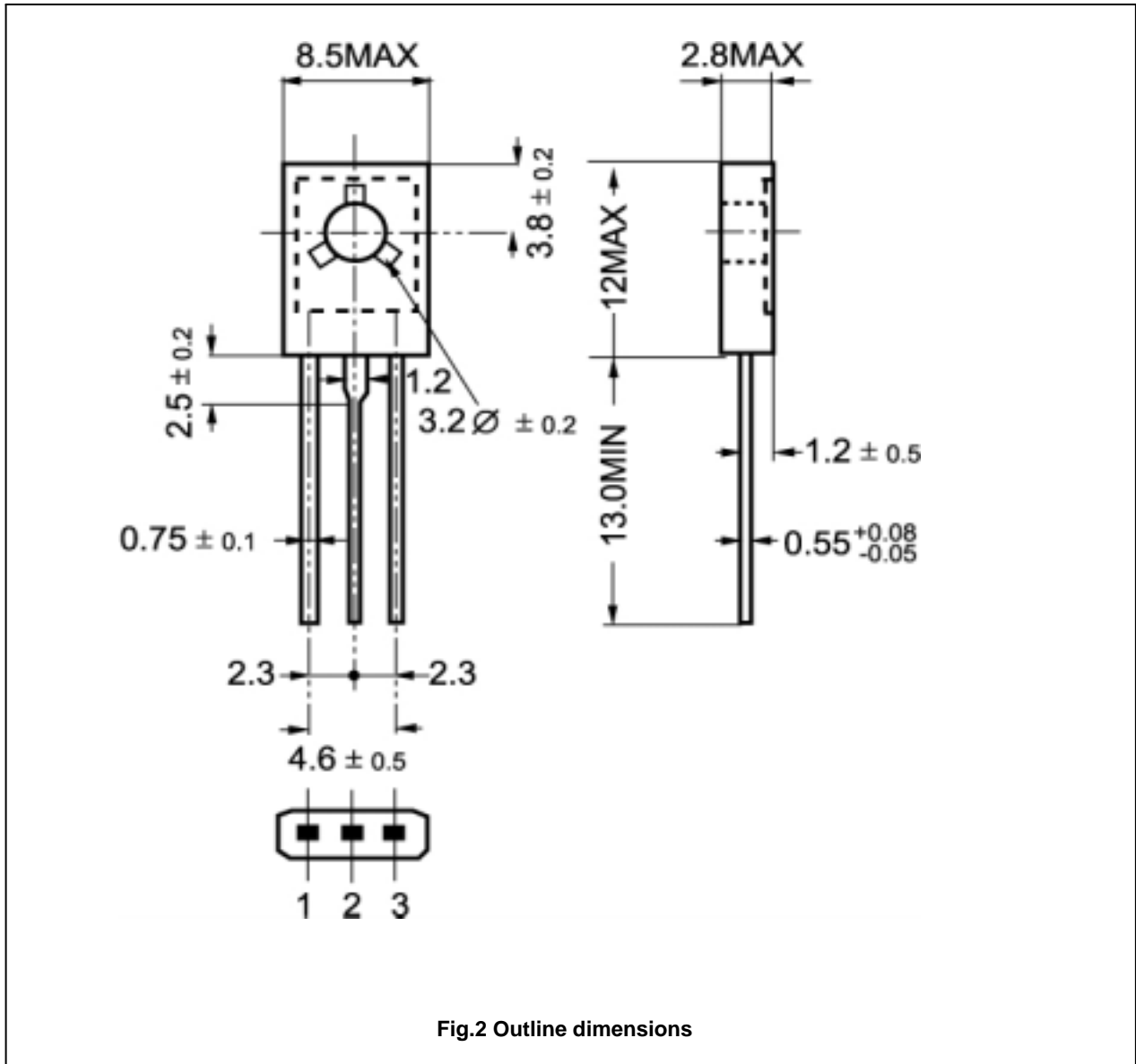
◆ h_{FE-1} Classifications

R	S	T
100-200	140-280	200-400

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PACKAGE OUTLINE



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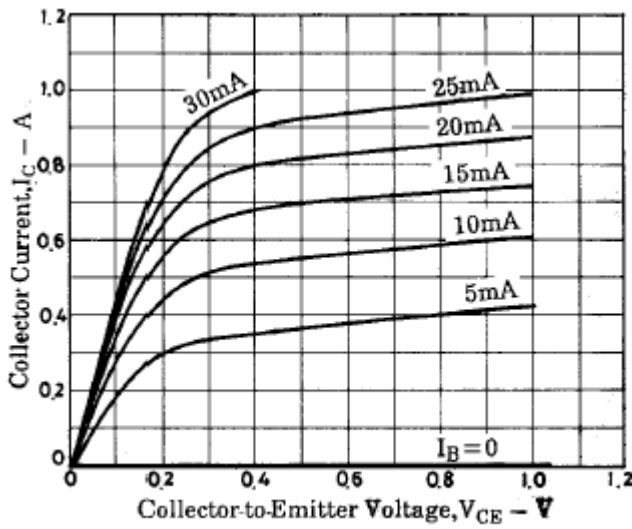


Fig.3 Static Characteristic

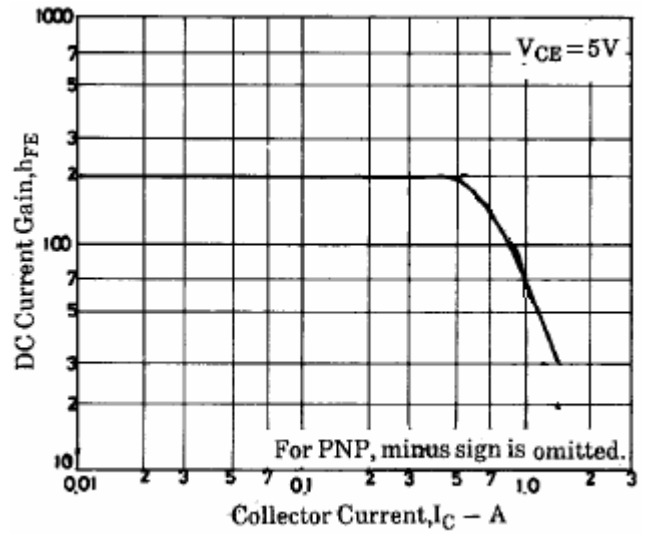


Fig.4 DC current Gain

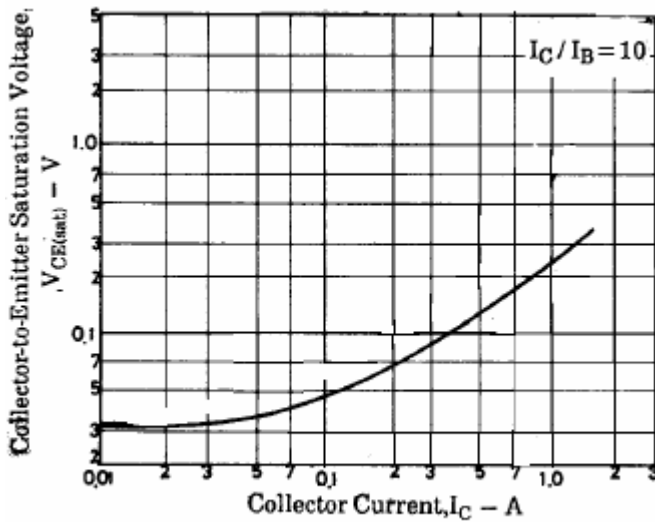


Fig.5 Collector-Emmitter Saturation Voltage

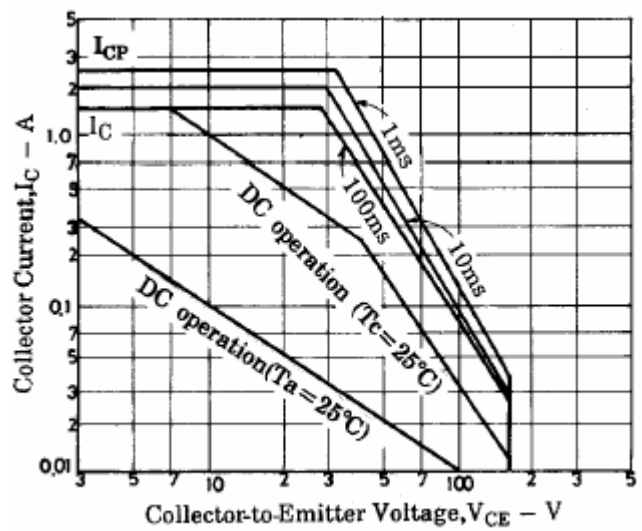


Fig.6 Safe Operating Area