

Inchange Semiconductor

Product Specification

Silicon PNP Power Transistors

2SB1015

DESCRIPTION

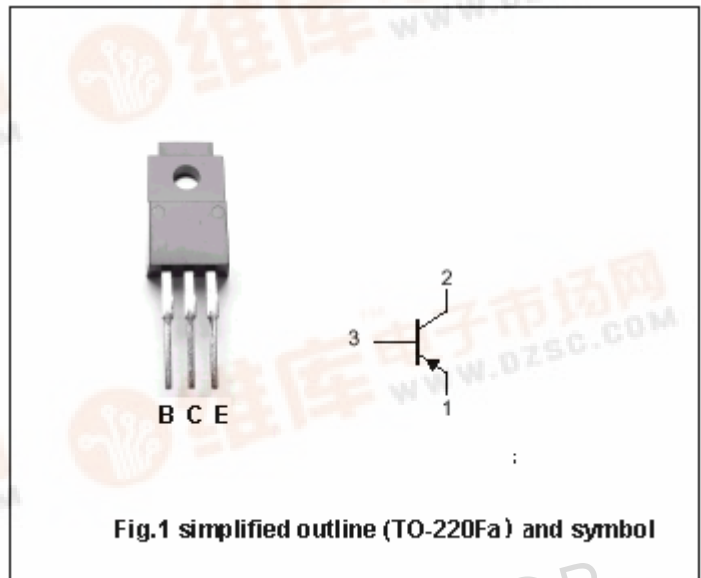
- With TO-220Fa package
- Collector power dissipation
: $P_C=25W@T_C=25$
- Low collector saturation voltage
- Complement to type 2SD1406

APPLICATIONS

- For audio frequency power amplifier applications

PINNING

PIN	DESCRIPTION
1	Emitter
2	Collector
3	Base



Absolute maximum ratings($T_a=25$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-60	V
V_{CEO}	Collector-emitter voltage	Open base	-60	V
V_{EBO}	Emitter-base voltage	Open collector	-7	V
I_C	Collector current		-3	A
I_B	Base current		-0.5	A
P_C	Collector power dissipation	$T_a=25$	2.0	W
		$T_C=25$	25	
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 _{CEO(BR)}	Collector-emitter breakdown voltage	I _C =-50mA; I _B =0	-60			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =-3A; I _B =-0.3A			-1.7	V
V _{BE}	Base-emitter voltage	I _C =-0.5A; V _{CE} =-5V			-1.0	V
I _{CBO}	Collector cut-off current	V _{CB} =-60V; I _E =0			-100	μA
I _{EBO}	Emitter cut-off current	V _{EB} =-7V; I _C =0			-100	μA
h _{FE-1}	DC current gain	I _C =-0.5A; V _{CE} =-5V	60		200	
h _{FE-2}	DC current gain	I _C =-3A; V _{CE} =-5V	20			
f _T	Transition frequency	I _C =-0.5A; V _{CE} =-5V		9		MHz
C _{OB}	Collector output capacitance	f=1MHz; V _{CB} =-10V		150		pF
Switching times						
t _{on}	Trun-on time	R _L =15Ω; V _{CC} =-30V I _{B1} =-I _{B2} =-0.2A Duty cycle 1%		0.4		μs
t _s	Storage time			1.7		μs
t _f	Fall time			0.5		μs

◆ h_{FE-1} Classifications

O	Y
60-120	100-200

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PACKAGE OUTLINE

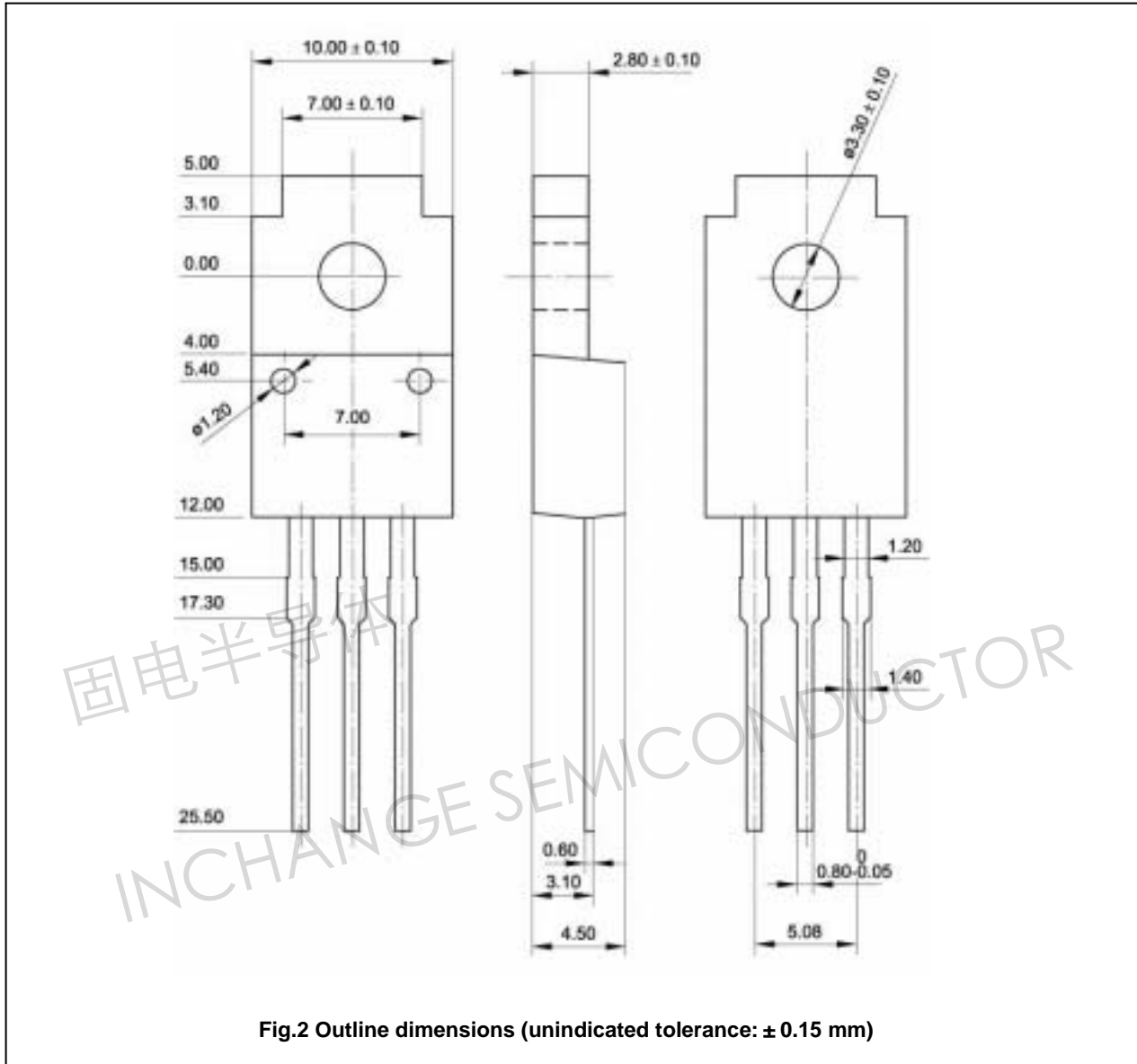


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)

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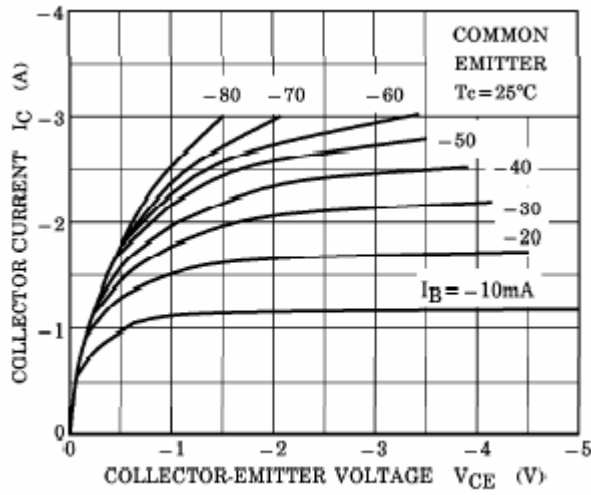


Fig.3 Static Characteristic

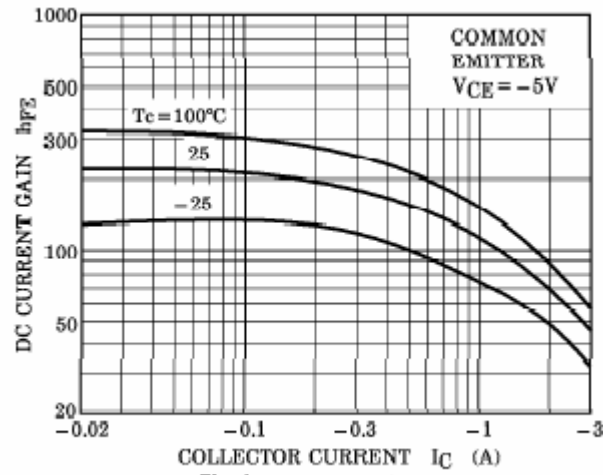


Fig.4 DC current Gain

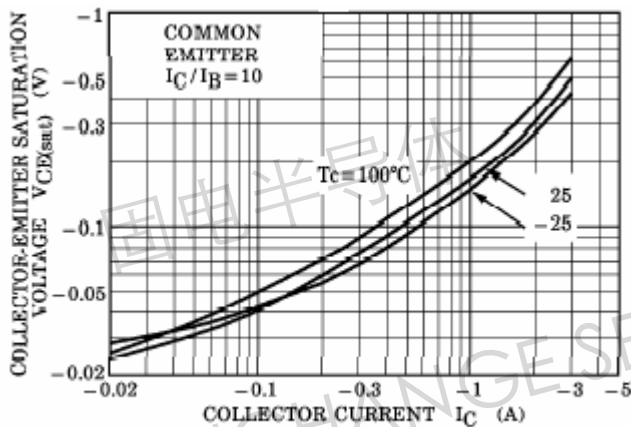


Fig.5 Collector-Emitter Saturation Voltage

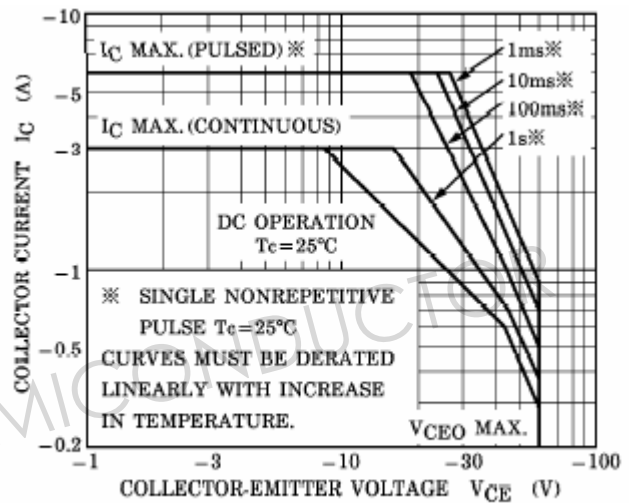


Fig.6 Safe Operating Area