

Inchange Semiconductor

Product Specification

Silicon PNP Power Transistors

2SA1290

DESCRIPTION

- With TO-220 package
- Short switching time
- Low collector saturation voltage
- Complement to type 2SC3254

APPLICATIONS

- Various inductance lamp drivers for electrical equipment
- Inverters, converters
- Power amplifier
- Switching regulator ,driver

PINNING

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

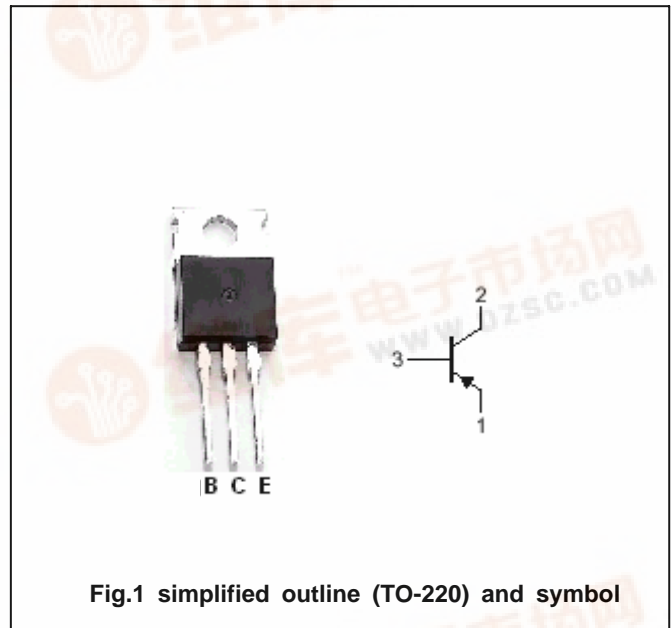


Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-80	V
V_{CEO}	Collector-emitter voltage	Open base	-60	V
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current		-7	A
I_{CM}	Collector current-peak		-10	A
P_C	Collector power dissipation	$T_C=25^\circ C$	35	W
T_j	Junction temperature		150	$^\circ C$
T_{stg}	Storage temperature		-55~150	$^\circ C$

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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 =-1mA, R _{BE} =∞	-60			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =-1mA, I _E =0	-80			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =-1mA, I _C =0	-7			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =-3.5A; I _B =-0.175A			-0.4	V
I _{CBO}	Collector cut-off current	V _{CB} =-40V; I _E =0			-100	μ A
I _{EBO}	Emitter cut-off current	V _{EB} =-4V; I _C =0			-100	μ A
h _{FE}	DC current gain	I _C =-1A; V _{CE} =-2V	70		280	
f _T	Transition frequency	I _C =-1A; V _{CE} =-5V		100		MHz

Switching times

t _{on}	Turn-on time	V _{CC} =-20V; I _C =-3A I _{B1} =-I _{B2} =-0.15A; R _L =6.67 Ω		0.1		μ s
t _{stg}	Storage time			0.5		μ s
t _f	Fall time			0.1		μ s

◆ h_{FE} Classifications

Q	R	S
70-140	100-200	140-280

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PACKAGE OUTLINE

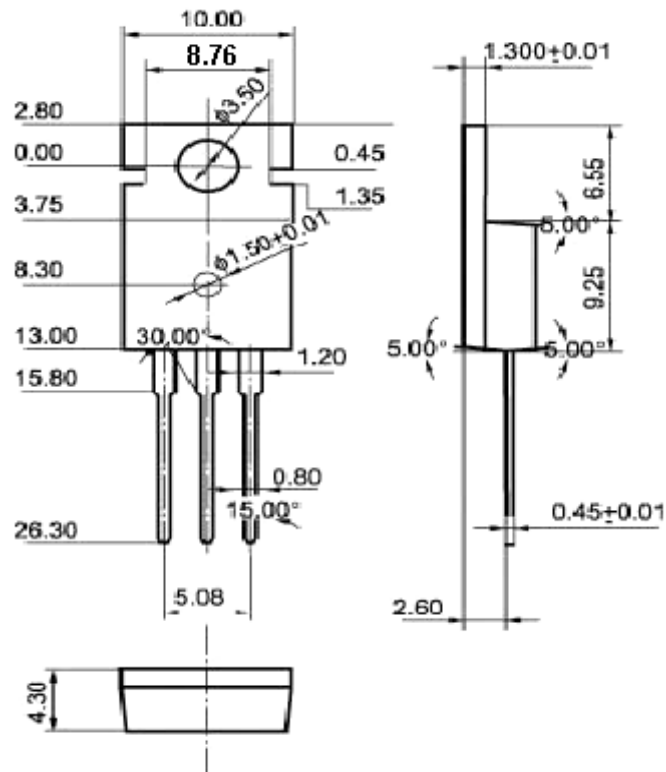


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)

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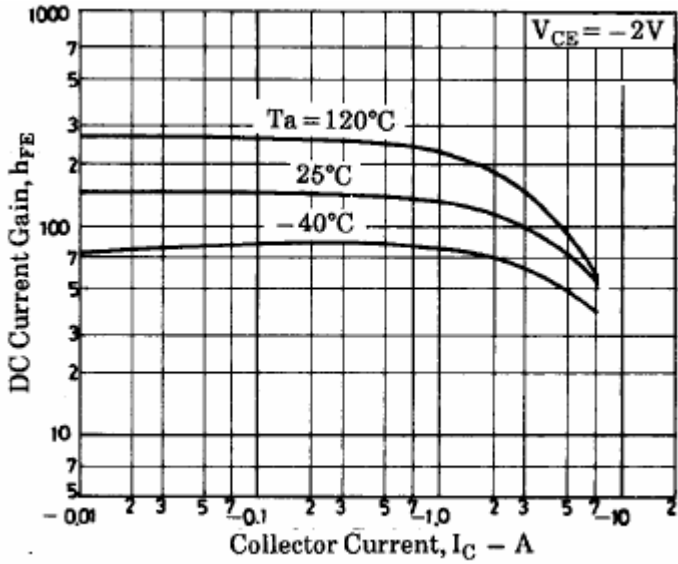


Fig.3 DC current Gain

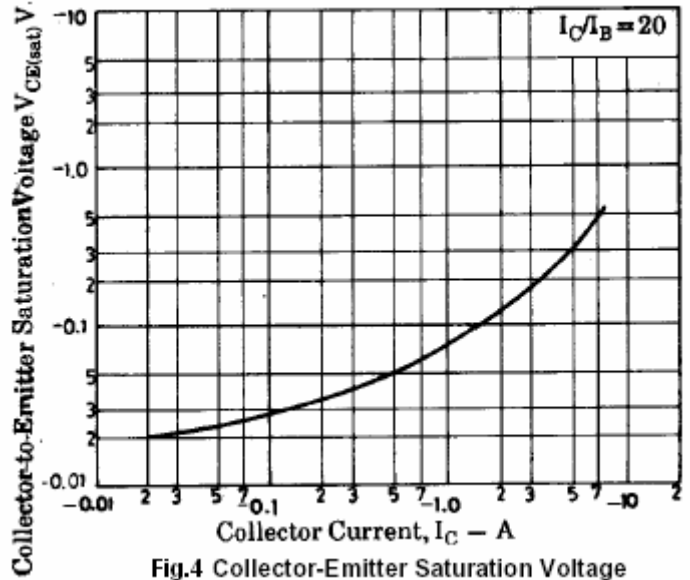


Fig.4 Collector-Emitter Saturation Voltage

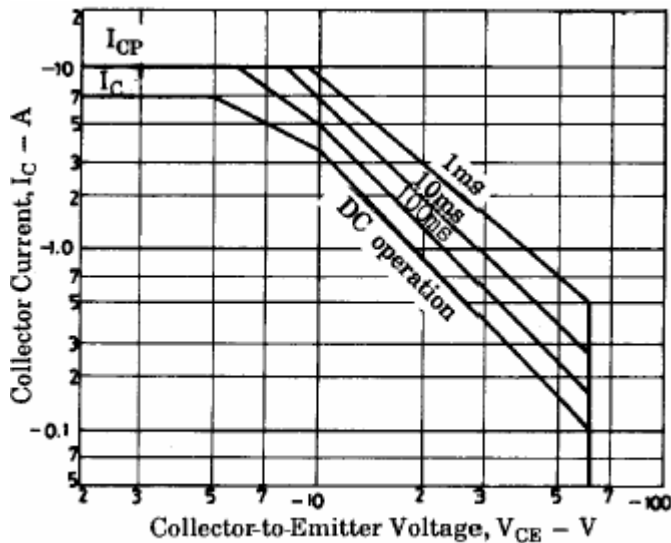


Fig.5 Safe Operating Area