

Silicon NPN Power Transistors

2SC3253

DESCRIPTION

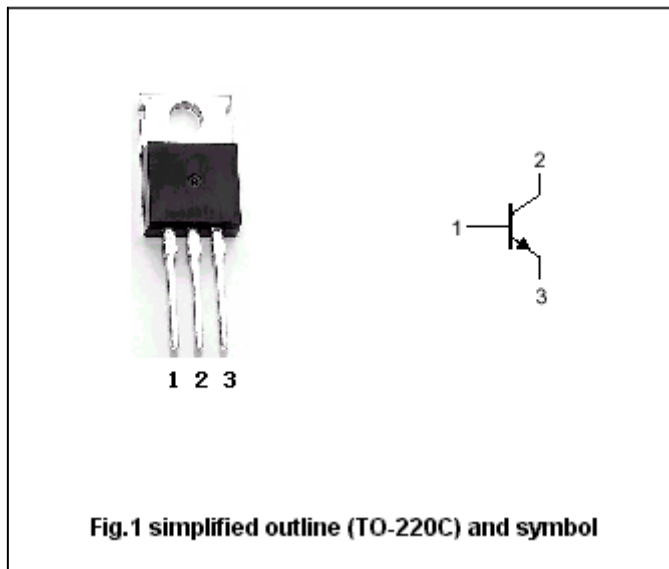
- With TO-220 package
- Short switching time
- Low collector saturation voltage
- Complement to type 2SA1289

APPLICATIONS

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

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	80	V
V _{CEO}	Collector-emitter voltage	Open base	60	V
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		5	A
I _{CM}	Collector current-peak		7	A
P _C	Collector power dissipation	T _C =25°C	30	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

 $T_j=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1\text{mA}, R_{BE}=\infty$	60			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=1\text{mA}, I_E=0$	80			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1\text{mA}, I_C=0$	5			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=2.5\text{A}; I_B=0.125\text{A}$			0.4	V
I_{CBO}	Collector cut-off current	$V_{CB}=40\text{V}; I_E=0$			100	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=4\text{V}; I_C=0$			100	μA
h_{FE}	DC current gain	$I_C=1\text{A}; V_{CE}=2\text{V}$	70		280	
f_T	Transition frequency	$I_C=1\text{A}; V_{CE}=5\text{V}$		100		MHz

◆ h_{FE} Classifications

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

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PACKAGE OUTLINE

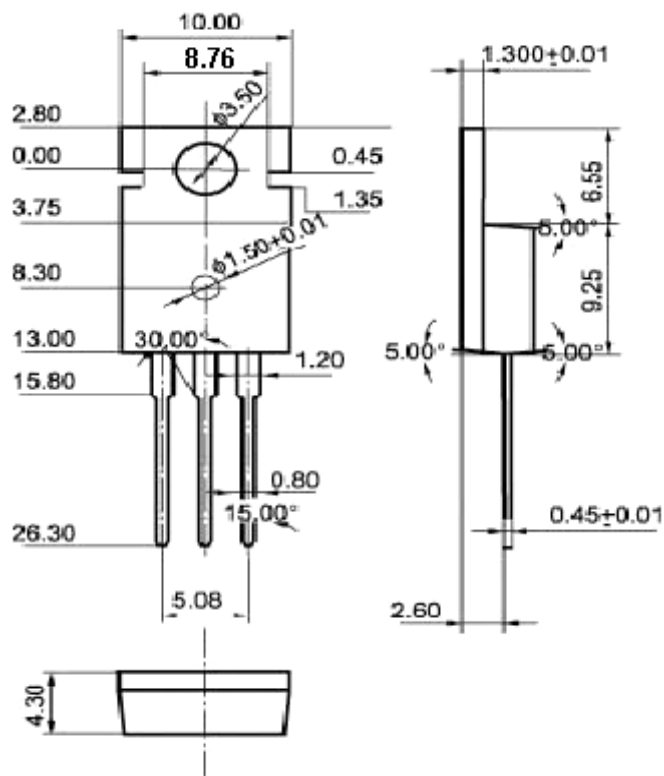


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)

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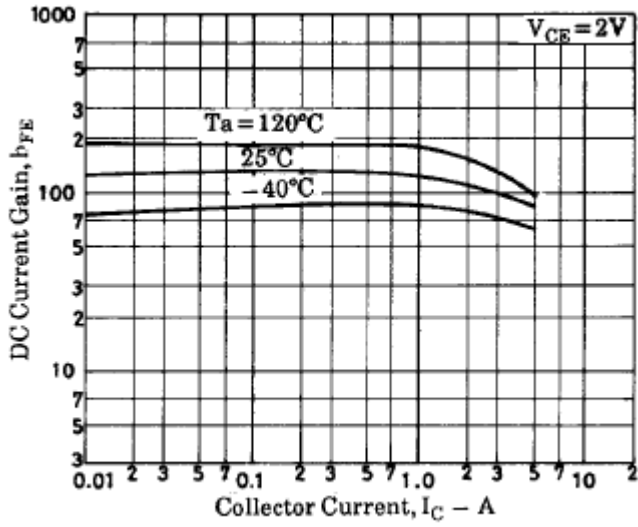


Fig.3 DC current Gain

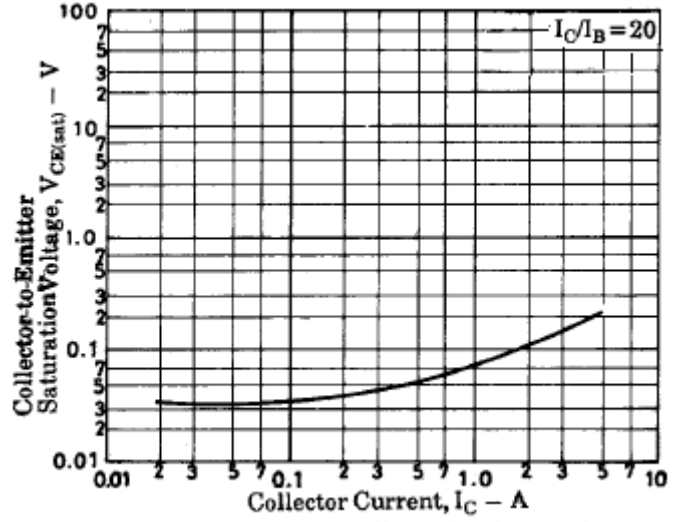


Fig.5 Collector-Emitter Saturation Voltage

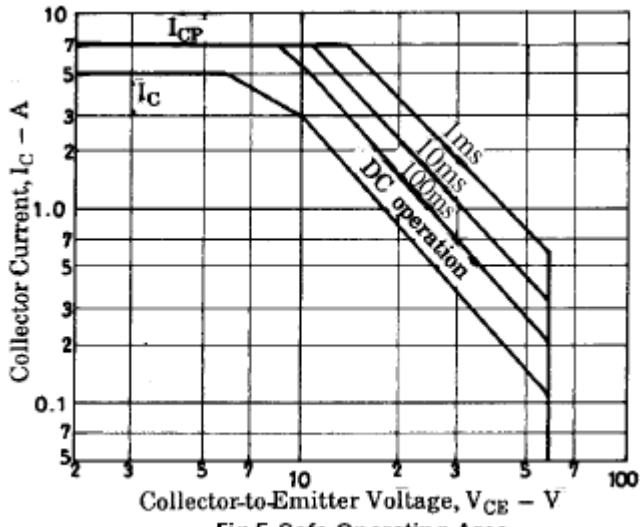


Fig.5 Safe Operating Area