

Silicon NPN Power Transistors

2SC2078

DESCRIPTION

With TO-220 package

·Low collector saturation voltage

APPLICATIONS

·27MHz RF power amplifier applications

PINNING

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

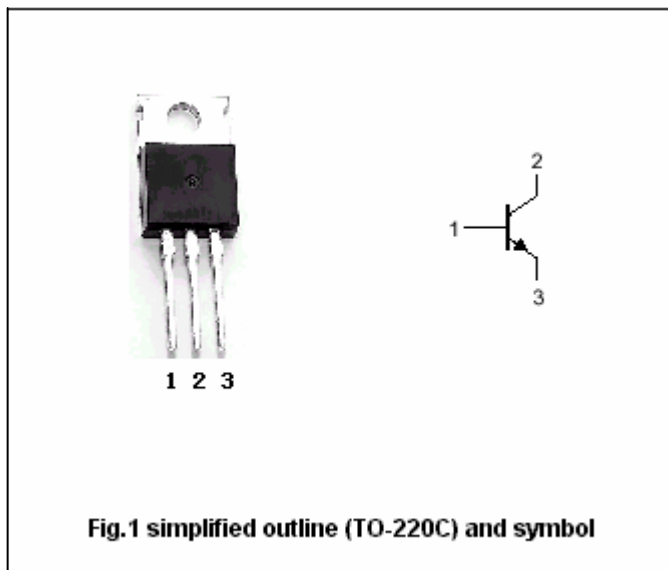


Fig.1 simplified outline (TO-220C) and symbol

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	75	V
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		3	A
I _{CM}	Collector current-peak		5	A
P _C	Collector power dissipation	T _a =25°C	1.2	W
		T _C =25°C	10	
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 _{CEsat}	Collector-emitter saturation voltage	I _C =1A; I _B =0.1 A		0.15	0.6	V
V _{BEsat}	Base-emitter saturation voltage	I _C =1A; I _B =0.1 A		0.9	1.2	V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =0.1mA; I _E =0	80			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =1mA; R _{BE} =150Ω	75			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =0.1mA; I _C =0	5			V
I _{CBO}	Collector cut-off current	V _{CB} =40V; I _E =0			10	μA
I _{EBO}	Emitter cut-off current	V _{EB} =4V; I _C =0			10	μA
h _{FE}	DC current gain	I _C =0.5A ; V _{CE} =5V	25		200	
C _{OB}	Output capacitance	I _E =0 ; V _{CB} =10V; f=1MHz		45		pF
f _T	Transition frequency	I _C =0.1A ; V _{CE} =10V	100			MHz

◆ h_{FE} Classifications

B	C	D	E
25-50	40-80	60-120	100-200

