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

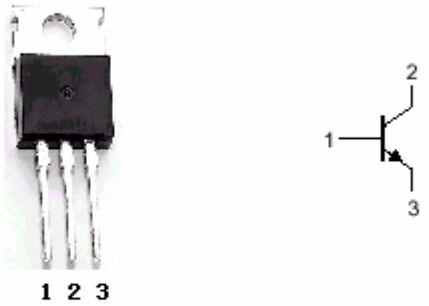

Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings (Ta=25□)

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□	1.2	W
		T_C=25□	10	
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-55~150	□

Silicon NPN Power Transistors 2SC2078

CHARACTERISTICS

Tj=25□ 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

PACKAGE OUTLINE

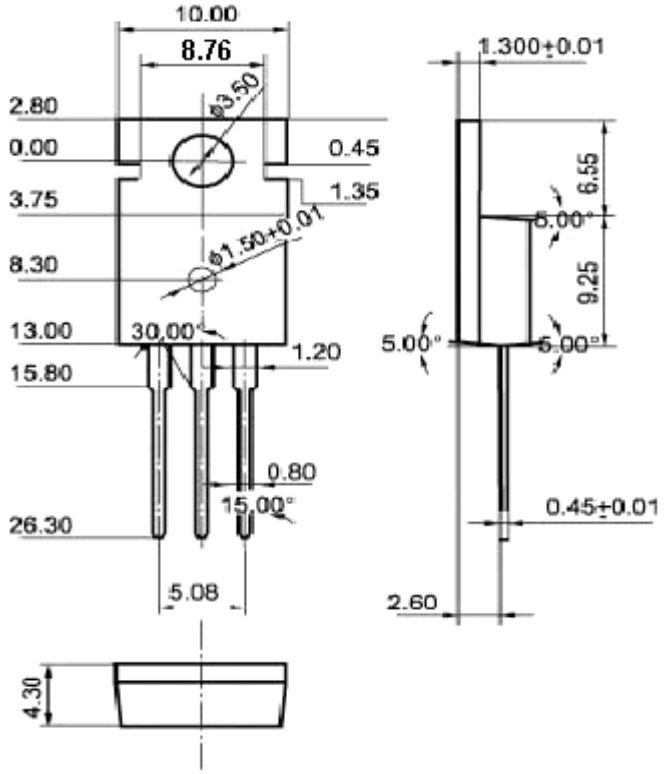

Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)