Silicon NPN Power Transistors 2SC5027

DESCRIPTION

- With TO-220C package
- High voltage and high reliability
- High speed switching
- Wide area of safe operation

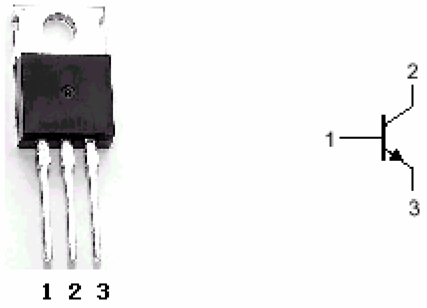

Fig.1 simplified outline (TO-220C) and symbol

PINNING

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

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1100	V
V_{CEO}	Collector-emitter voltage	Open base	800	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current (DC)		3	A
I_{CM}	Collector current-Peak		10	A
I_B	Base current		1.5	A
P_C	Collector dissipation	T_C=25℃	50	W
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-55~150	℃

CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=5mA ;I_B=0	800			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=1mA; I_E=0	1100			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=1mA;I_C=0	7			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=1.5A ;I_B=0.3A			2.0	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=1.5A ;I_B=0.3A			1.5	V
I_{CBO}	Collector cut-off current	V_{CB}=800V ;I_E=0			10	μA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			10	μA
h_{FE-1}	DC current gain	I_C=0.2A ; V_{CE}=5V	10		40	
h_{FE-2}	DC current gain	I_C=1A ; V_{CE}=5V	8			
f_T	Transition frequency	I_C=0.2A ; V_{CE}=10V		15		MHz
C_{ob}	Collector output capacitance	f=1MHz ; V_{CB}=10V		60		pF

Switching times

t_{on}	Turn-on time	I_C=5 I_{B1}=-2.5I_{B2}=2A V_{CC}=400V R_L=200Ω			0.5	μs
t_s	Storage time				3.0	μs
t_f	Fall time				0.3	μs

◆ **h_{FE-1} Classifications**

N	R	O
10-20	15-30	20-40

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PACKAGE OUTLINE

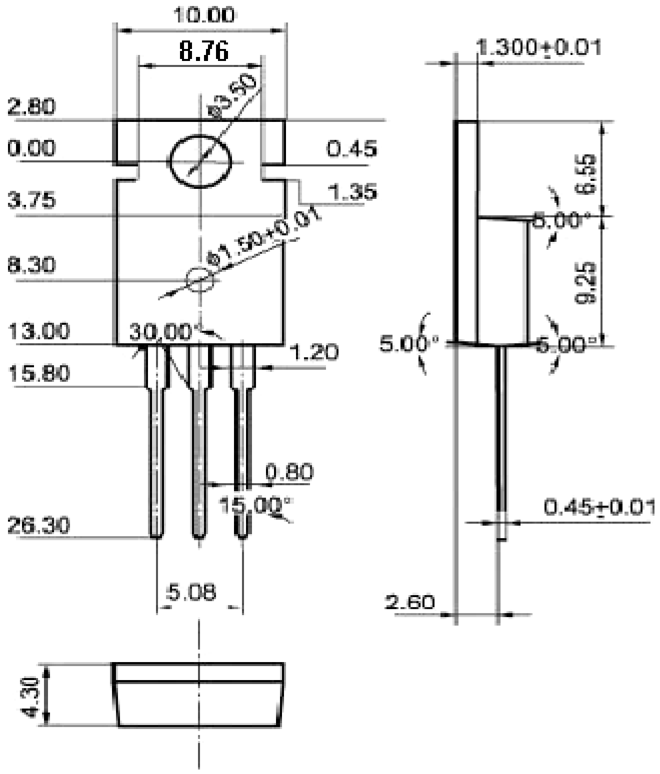

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)