Silicon NPN Power Transistors 2SC2023

DESCRIPTION

- With TO-220C package
- High breakdown voltage

APPLICATIONS

- Series regulator, switch, and general purpose applications

PINNING

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

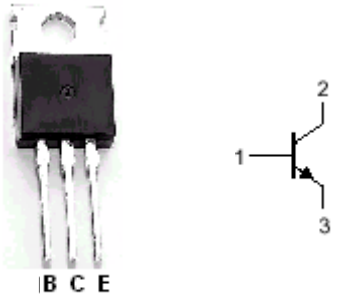


Fig.1 simplified outline (TO-220) and symbol

Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	300	V
V_{CEO}	Collector-emitter voltage	Open base	300	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		2	A
I_B	Base current		0.2	A
P_C	Collector dissipation	T_C=25℃	40	W
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-50~150	℃

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CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=25mA ; I_B=0	300			V
V_{CEsat}	Collector-emitter saturation voltage	I_C=1A; I_B=0.2A			1.0	V
I_{CBO}	Collector cut-off current	V_{CB}=300V ;I_E=0			1.0	mA
I_{EBO}	Emitter cut-off current	V_{EB}=6V; I_C=0			1.0	mA
h_{FE}	DC current gain	I_C=0.5 A ; V_{CE}=4V	30			
f_T	Transition frequency	I_C=0.2A ; V_{CE}=12V		10		MHz
C_{ob}	Collector output capacitance	f=1MHz ; V_{CB}=10V		75		pF

Switching times

t_{on}	Turn-on time	I_C=1A, I_{B1}=0.1A I_{B2}=-0.2A; V_{CC}=100V R_L=100Ω		0.30		μs
t_s	Storage time			4.00		μs
t_f	Fall time			1.00		μs

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PACKAGE OUTLINE

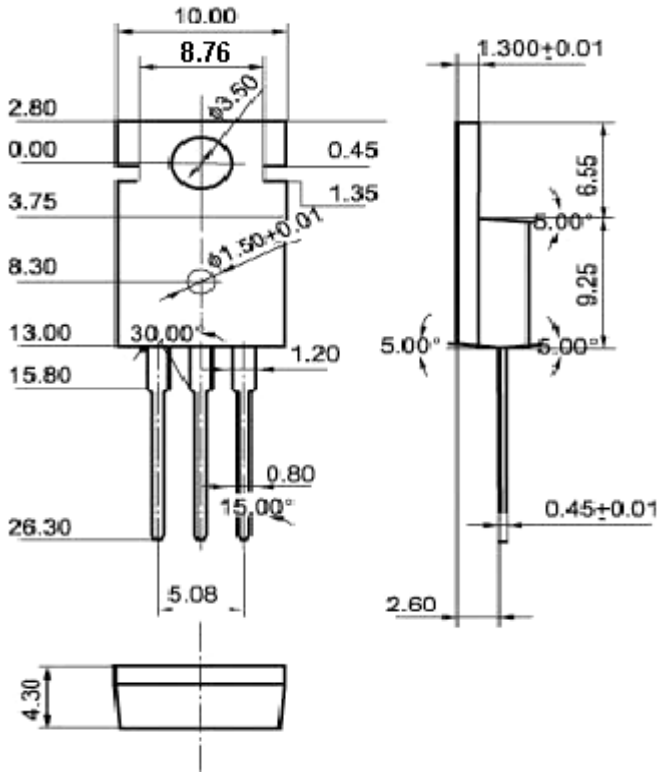


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)