

Silicon NPN Power Transistors

2SC2516

DESCRIPTION

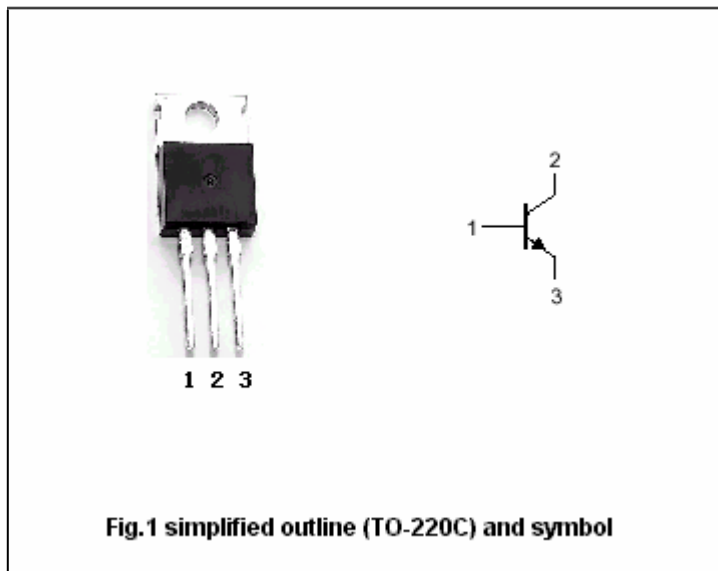
- With TO-220C package
- Low collector saturation voltage
- Wide area of safe operation

APPLICATIONS

- Switching regulators
- DC-DC converters
- High frequency power amplifiers

PINNING

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

Absolute maximum ratings($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	150	V
V_{CEO}	Collector-emitter voltage	Open base	60	V
V_{EBO}	Emitter-base voltage	Open collector	12	V
I_C	Collector current		5	A
I_{CM}	Collector current-peak		10	A
I_B	Base current		2.5	A
P_T	Total power dissipation	$T_a=25^\circ\text{C}$	1.5	W
		$T_C=25^\circ\text{C}$	30	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =3.0A ; I _B =0; L=1mH	60			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =3A; I _B =0.3A			0.6	V
V _{BEsat}	Base-emitter saturation voltage	I _C =3A; I _B =0.3A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =100V ; I _E =0			10	μA
I _{CEX}	Collector cut-off current	V _{CE} =100V; V _{BE} =-1.5V T _a =125 °C			10 1	μA mA
I _{EBO}	Emitter cut-off current	V _{EB} =10V ; I _C =0			10	μA
h _{FE-1}	DC current gain	I _C =0.2 A ; V _{CE} =5V	40			
h _{FE-2}	DC current gain	I _C =3 A ; V _{CE} =5V	40		200	

Switching times

t _{on}	Turn-on time	I _C =3A; I _{B1} =-I _{B2} =0.3A R _L =17Ω; V _{CC} =50V			0.5	μs
t _s	Storage time				2.5	μs
t _f	Fall time				0.5	μs

◆ h_{FE-2} Classifications

M	L	K
40-80	60-120	100-200

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PACKAGE OUTLINE



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