

Silicon NPN Power Transistors

2SC3679

DESCRIPTION

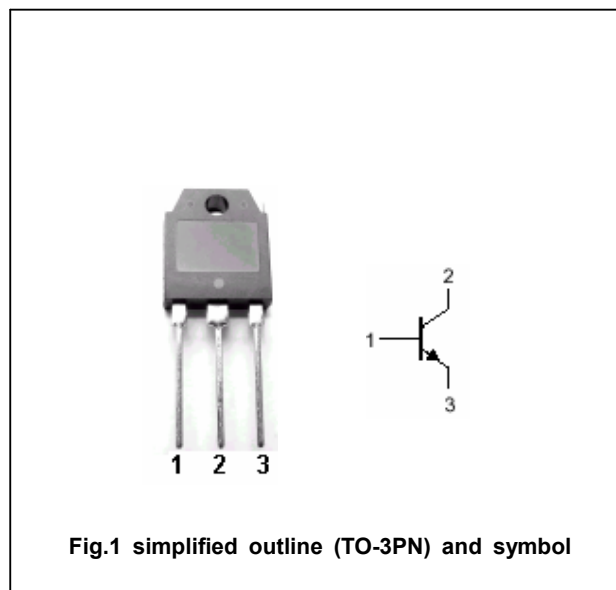
- With TO-3PN package
- High voltage switching transistor

APPLICATIONS

- For switching regulator and general purpose applications

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	900	V
V_{CEO}	Collector-emitter voltage	Open base	800	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current (DC)		5	A
I_{CM}	Collector current -peak		10	A
I_B	Base current (DC)		2.5	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	100	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

 $T_j=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=10\text{mA}; I_B=0$	800			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=2\text{A}; I_B=0.4\text{A}$			0.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=2\text{A}; I_B=0.4\text{A}$			1.2	V
I_{CBO}	Collector cut-off current	$V_{CB}=800\text{V}; I_E=0$			0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=7\text{V}; I_C=0$			0.1	mA
h_{FE}	DC current gain	$I_C=2\text{A}; V_{CE}=4\text{V}$	10		30	
f_T	Transition frequency	$I_C=0.5\text{A}; V_{CE}=12\text{V}$		6		MHz
C_{OB}	Collector output capacitance	$f=1\text{MHz}; V_{CB}=10\text{V}$		75		pF

Switching times

t_{on}	Turn-on time	$I_C=2.0\text{A}$ $I_{B1}=0.3\text{A}, I_{B2}=-1\text{A}$ $V_{CC}=250\text{V}, R_L=125\Omega$			1.0	μs
t_s	Storage time				5.0	μs
t_f	Fall time				1.0	μs

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Technical drawing of a mechanical part, showing front, side, and top views with dimensions.

Front View Dimensions:

- Overall width: 15.60
- Top flange width: 13.50
- Inner flange width: 10.00
- Inner flange hole diameter: 8.00
- Top flange hole diameter: 30- ϕ 11.50
- Inner flange hole diameter: 10- ϕ 13.50
- Top flange hole position: 42.60, 40.60, 37.60, 36.60, 35.60
- Inner flange hole position: 26.80, 25.00, 22.60
- Inner flange hole diameter: 12.00
- Inner flange hole position: 21.10, 19.30
- Inner flange hole diameter: R0.50
- Inner flange hole position: 3.25, 2.00, 0.00, 2.00
- Inner flange hole diameter: 10- ϕ 12.05(+0.05)
- Inner flange hole position: 0.60

Side View Dimensions:

- Overall height: 40.10
- Top flange height: 7.00
- Inner flange height: 17.00
- Top flange hole diameter: ϕ 15.50
- Inner flange hole diameter: 13.50
- Top flange hole position: 4.80
- Inner flange hole position: 2.00 \pm 0.005
- Inner flange hole diameter: 3.00
- Inner flange hole position: 0.60 \pm 0.005
- Inner flange hole diameter: 3.40 \pm 0.05
- Inner flange hole position: 10.90 \pm 0.01
- Inner flange hole diameter: 1.00

Top View Dimensions:

- Overall width: 15.60
- Top flange width: 13.50
- Inner flange width: 10.00
- Inner flange hole diameter: 8.00
- Top flange hole diameter: 30- ϕ 11.50
- Inner flange hole diameter: 10- ϕ 13.50
- Top flange hole position: 42.60, 40.60, 37.60, 36.60, 35.60
- Inner flange hole position: 26.80, 25.00, 22.60
- Inner flange hole diameter: 12.00
- Inner flange hole position: 21.10, 19.30
- Inner flange hole diameter: R0.50
- Inner flange hole position: 3.25, 2.00, 0.00, 2.00
- Inner flange hole diameter: 10- ϕ 12.05(+0.05)
- Inner flange hole position: 0.60

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

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