

Silicon NPN Power Transistors

2SC4105

DESCRIPTION

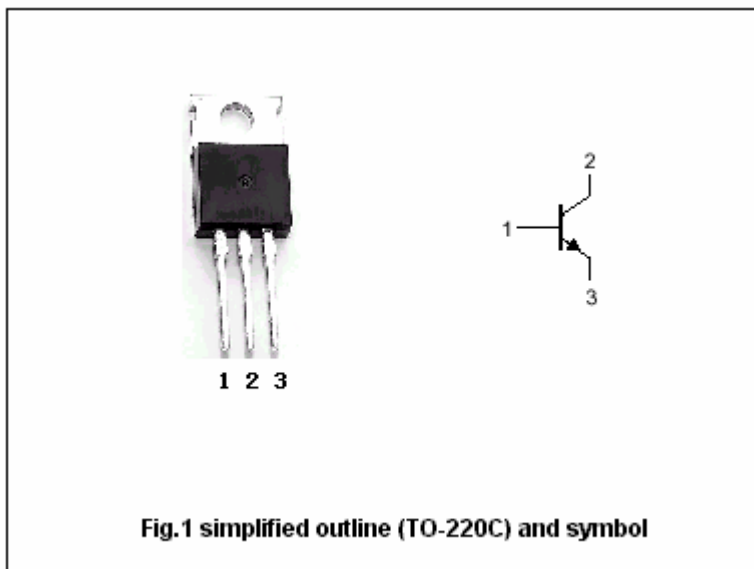
- With TO-220C package
- High breakdown voltage
- Fast switching speed
- Wide area of safe operation

APPLICATIONS

- For switching regulator applications

PINNING

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



Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CB0}	Collector-base voltage	Open emitter	500	V
V _{CEO}	Collector-emitter voltage	Open base	400	V
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current (DC)		4	A
I _{CM}	Collector current-Peak		8	A
I _B	Base current		1.5	A
P _C	Collector dissipation	T _C =25°C	40	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

T_j=25 °C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =5mA ; R _{BE} =∞	400			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =1mA ; I _E =0	500			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =1mA ; I _C =0	7			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =2A ; I _B =0.4A			0.8	V
V _{BEsat}	Base-emitter saturation voltage	I _C =2A ; I _B =0.4A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =400V ; 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 =0.4A ; V _{CE} =5V	15		50	
h _{FE-2}	DC current gain	I _C =2A ; V _{CE} =5V	10			
h _{FE-3}	DC current gain	I _C =10mA ; V _{CE} =5V	10			
f _T	Transition frequency	I _C =0.4A ; V _{CE} =10V		20		MHz
C _{ob}	Collector output capacitance	f=1MHz ; V _{CB} =10V		50		pF

Switching times

t _{on}	Turn-on time	I _C =3A, I _{B1} =0.6A I _{B2} =-1.2A; V _{CC} =200V R _L =66.6Ω			0.5	μs
t _s	Storage time				2.5	μs
t _f	Fall time				0.3	μs

◆ h_{FE-1} Classifications

L	M	N
15-30	20-40	30-50

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