

Silicon NPN Power Transistors

2SC5271

DESCRIPTION

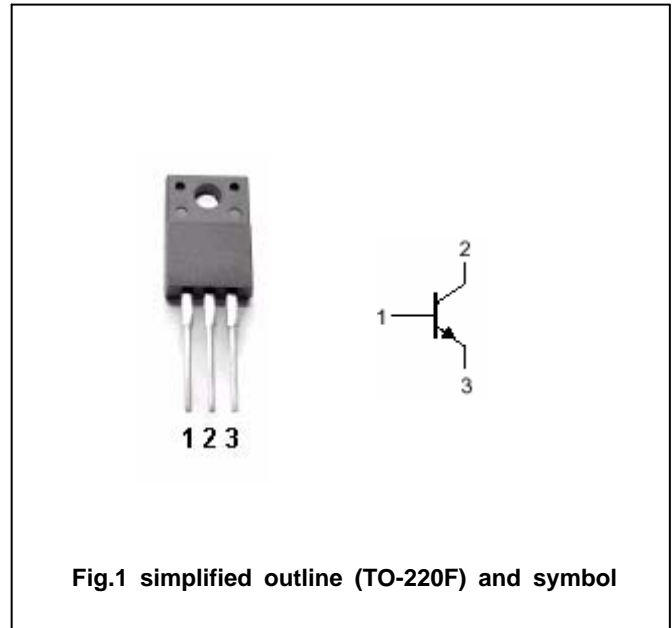
- With TO-220F package

APPLICATIONS

- For resonant switching regulator and general purpose applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	300	V
V_{CEO}	Collector-emitter voltage	Open base	200	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		5	A
I_{CM}	Collector current-peak		10	A
I_B	Base current		2	A
P_C	Collector power dissipation	$T_C=25$	30	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =10mA; I _B =0	200			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =2.5A; I _B =0.5A			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =2.5A; I _B =0.5A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =300V; I _E =0			100	μA
I _{EBO}	Emitter cut-off current	V _{EB} =7V; I _C =0			100	μA
h _{FE-1}	DC current gain	I _C =2.5A; V _{CE} =2V	10		30	
h _{FE-2}	DC current gain	I _C =1mA; V _{CE} =2V	15			
f _T	Transition frequency	I _E =-0.5A; V _{CE} =12V		10		MHz
C _{OB}	Output capacitance	V _{CB} =10V; f=1MHz		45		pF
Switching times						
t _{on}	Turn-on time	I _C =2.5A; I _{B1} =0.5A; I _{B2} =-1.0A R _L =60 Ω; V _{CC} =150V			0.3	μs
t _{stg}	Storage time				1.0	μs
t _f	Fall time				0.1	μs

