

Silicon PNP Power Transistors

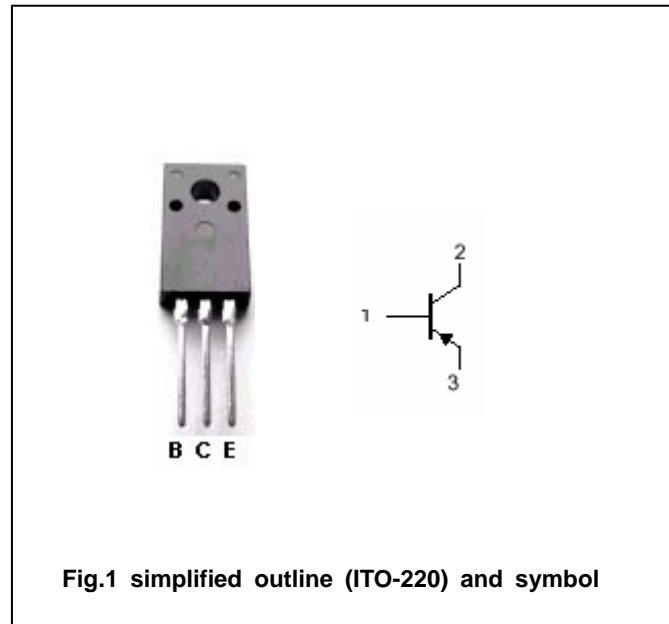
2SA1601

DESCRIPTION

- With ITO-220 package
- Switching power transistor
- Low collector saturation voltage

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-60	V
V_{CEO}	Collector-emitter voltage	Open base	-40	V
V_{EBO}	Emitter-base voltage	Open collector	-7	V
I_C	Collector current		-15	A
I_{CM}	Collector current-Peak		-30	A
I_B	Base current		-2	A
I_{BM}	Base current-Peak		-3	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	45	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-C}$	Thermal resistance junction case	2.77	$^\circ\text{C}/\text{W}$

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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 =-0.1A ; I _B =0	-40			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =-7.5A ; I _B =-0.4A			-0.3	V
V _{BEsat}	Base-emitter saturation voltage	I _C =-7.5A ; I _B =-0.4A			-1.2	V
I _{CBO}	Collector cut-off current	At rated volatge			-0.1	mA
I _{CEO}	Collector cut-off current					
I _{EBO}	Emitter cut-off current	At rated volatge			-0.1	mA
h _{FE}	DC current gain	I _C =-7.5A ; V _{CE} =-2V	70			
f _T	Transition frequency	I _C =-1.5A ; V _{CE} =-10V		50		MHz

Switching times

t _{on}	Turn-on time	I _C =-7.5A ; I _{B1} =-I _{B2} =-0.75A , R _L =4 Ω ; V _{BB2} =-4V			0.3	μ s
t _s	Storage time				1.5	μ s
t _f	Fall time				0.5	μ s

