

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

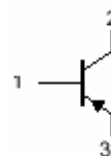


Fig.1 simplified outline (ITO-220) and symbol

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

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

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	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 voltage			-0.1	mA
I_{CEO}	Collector cut-off current					
I_{EBO}	Emitter cut-off current	At rated voltage			-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

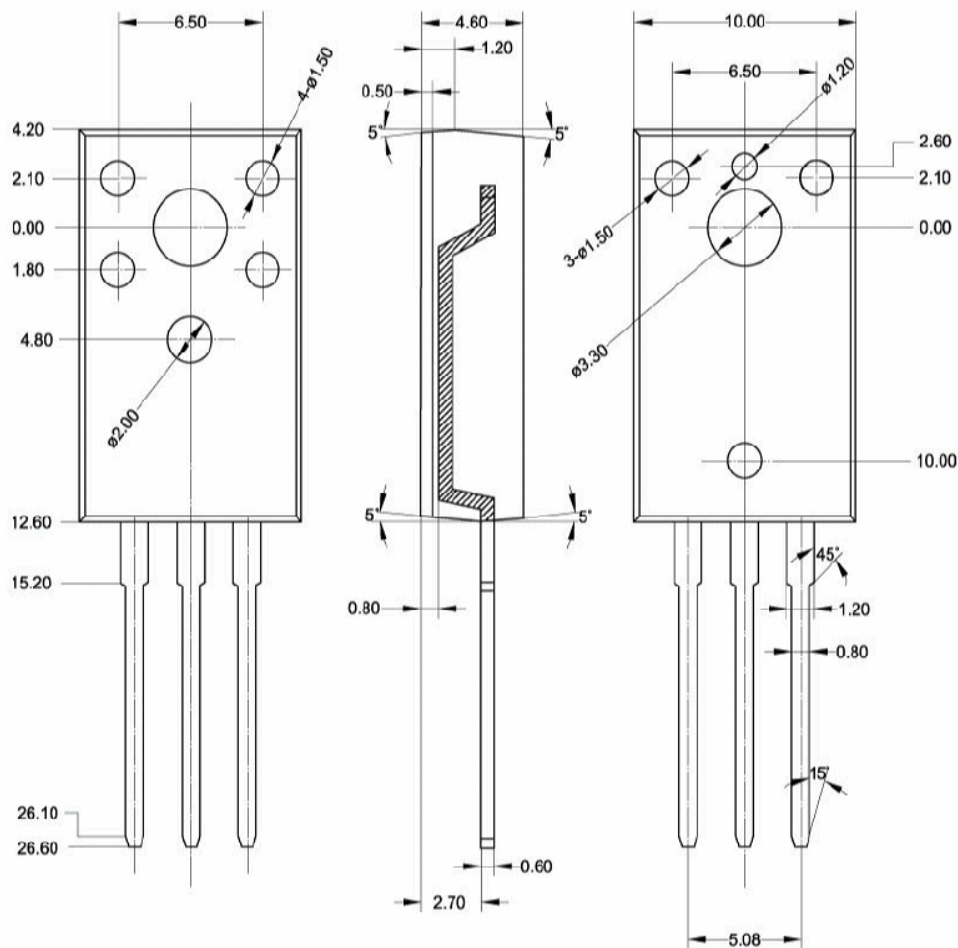
Switching times

t_{on}	Turn-on time	$I_C = -7.5A ; I_{B1} = -I_{B2} = -0.75A ,$ $R_L = 4\Omega ; V_{BB2} = -4V$			0.3	μs
t_s	Storage time				1.5	μs
t_f	Fall time				0.5	μs

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PACKAGE OUTLINE

Fig.2 Outline dimensions (unindicated tolerance: ± 0.20 mm)