

Silicon NPN Power Transistors

2SC4056

DESCRIPTION

- With ITO-220 package
- Switching power transistor

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

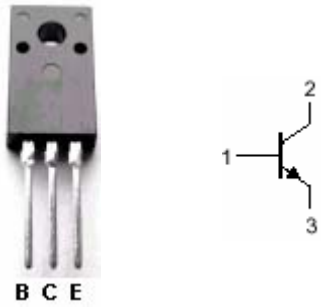


Fig.1 simplified outline (ITO-220) and symbol

Absolute maximum ratings(Ta=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	600	V
V _{CEO}	Collector-emitter voltage	Open base	450	V
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current		8	A
I _{CM}	Collector current-Peak		16	A
I _B	Base current		4	A
I _{BM}	Base current-peak		8	A
P _T	Total power dissipation	T _C =25	45	W
T _j	Junction temperature		150	
T _{stg}	Storage temperature		-55~150	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-C}	Thermal resistance junction case	2.77	/W

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.2A ; I_B=0$	450			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=4A ; I_B=0.8A$			1.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=4A ; I_B=0.8A$			1.5	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-1}	DC current gain	$I_C=4A ; V_{CE}=5V$	10			
h_{FE-2}	DC current gain	$I_C=1mA ; V_{CE}=5V$	5			
f_T	Transition frequency	$I_C=0.8A ; V_{CE}=10V$		20		MHz
t_{on}	Turn-on time	$I_C=4A ; I_{B1}=0.8A$ $I_{B2}=1.6A , R_L=37.5\Omega$ $V_{BB2}=4V$			0.5	μs
t_s	Storage time				2.0	μs
t_f	Fall time				0.2	μs

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PACKAGE OUTLINE

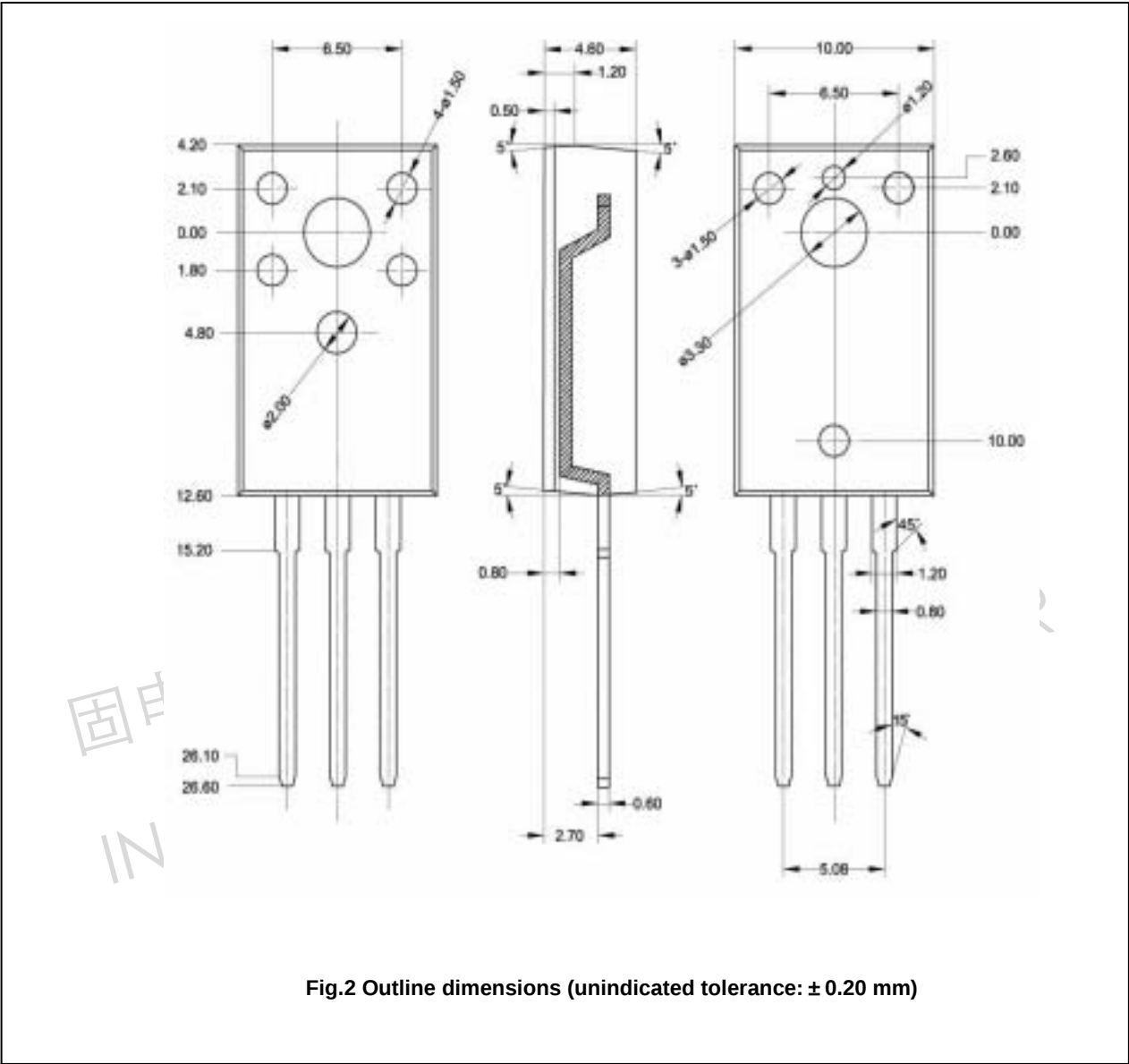


Fig.2 Outline dimensions (unindicated tolerance: ± 0.20 mm)