

Silicon NPN Power Transistors

2SC4110

DESCRIPTION

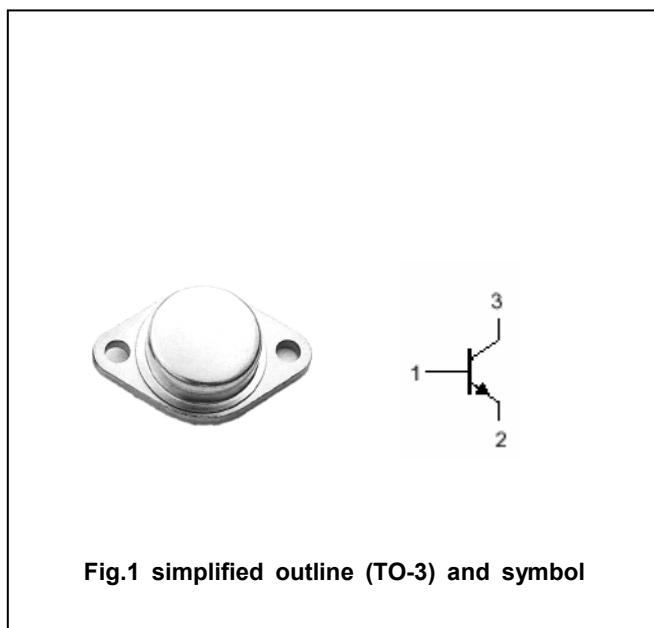
- With TO-3 package
- Fast switching speed
- Wide area of safe operation
- High voltage,high reliability

APPLICATIONS

- For switching regulator applications

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

ABSOLUTE MAXIMUM RATINGS($T_C=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	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		25	A
I_{CP}	Collector current-peak		40	A
I_B	Base current		8	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	160	W
		$T_a=25^\circ\text{C}$	2.5	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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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 =10mA ; 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 _{CE(sat)}	Collector-emitter saturation voltage	I _C =16A; I _B =3.2A			0.8	V
V _{BE(sat)}	Base-emitter saturation voltage	I _C =16A; I _B =3.2A			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 =3.2A ; V _{CE} =5V	15		50	
h _{FE-2}	DC current gain	I _C =16A ; V _{CE} =5V	10			
h _{FE-3}	DC current gain	I _C =10mA ; V _{CE} =5V	10			
f _T	Transition frequency	I _C =3.2A ; V _{CE} =10V		20		MHz
C _{ob}	Output capacitance	I _E =0; V _{CB} =10V, f=1MHz		300		pF

Switching times

t _{on}	Turn-on time	I _C =20A; I _{B1} =4A; I _{B2} =-8A R _L =10Ω; V _{CC} =200V			0.5	μs
t _s	Storage time				2.5	μs
t _f	Fall time				0.3	μs

PACKAGE OUTLINE

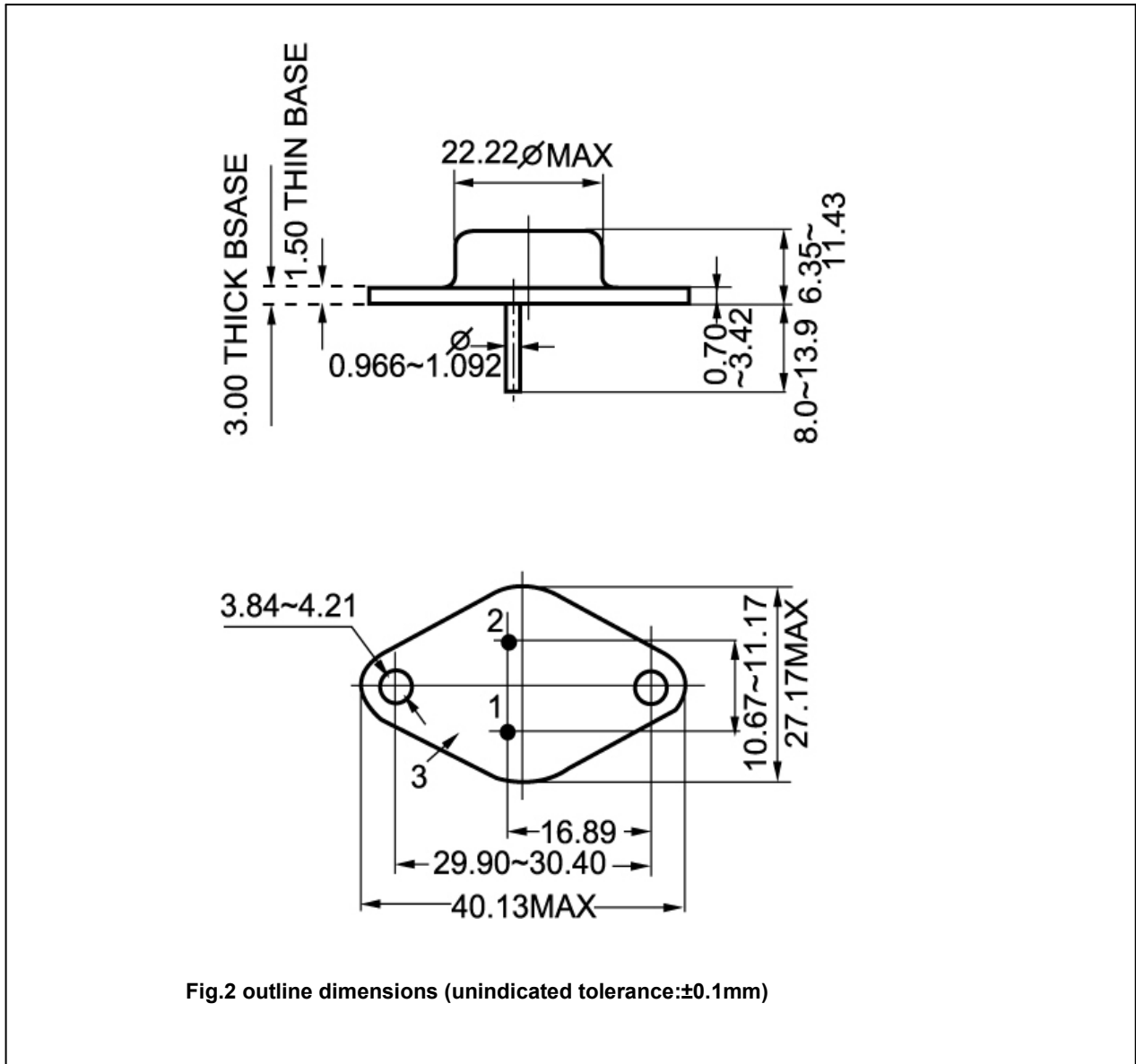


Fig.2 outline dimensions (unindicated tolerance:±0.1mm)