

Silicon NPN Power Transistors

BUY69A BUY69B BUY69C

**DESCRIPTION**

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With TO-3 package  
 ·High voltage capability

**APPLICATIONS**

·For horizontal deflection output stage of CTV receivers and high voltage, fast switching and industrial applications

**PINNING (See Fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

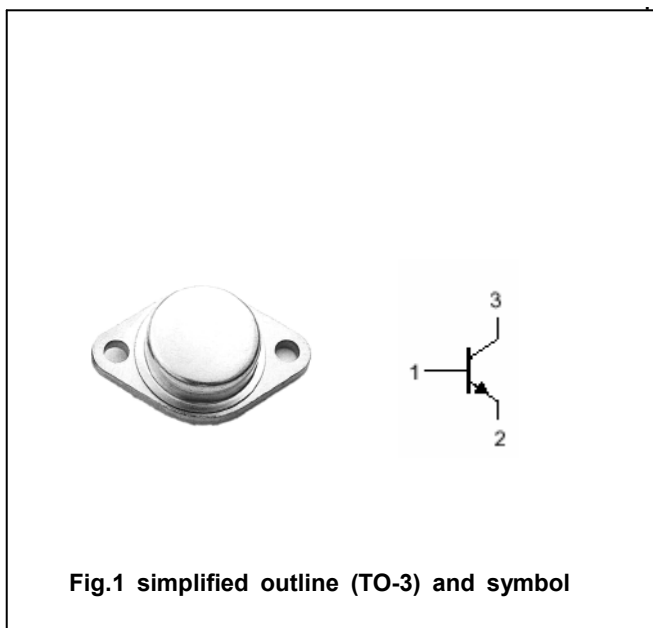


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	BUY69A	1000	V
		BUY69B	800	
		BUY69C	500	
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	BUY69A	400	V
		BUY69B	325	
		BUY69C	200	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	8	V
I <sub>C</sub>	Collector current		10	A
I <sub>CM</sub>	Collector current-peak		15	A
I <sub>B</sub>	Base current		3.0	A
P <sub>D</sub>	Total power dissipation	T <sub>C</sub> =25°C	100	W
T <sub>j</sub>	Junction temperature		200	°C
T <sub>stg</sub>	Storage temperature		-65~200	°C

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance from junction to case	1.75	°C/W

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE(SUS)</sub>	Collector-emitter sustaining voltage	BUY69A	400			V
		BUY69B	325			
		BUY69C	200			
V <sub>CBO</sub>	Collector-base voltage	BUY69A	1000			V
		BUY69B	800			
		BUY69C	500			
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =8A ; I <sub>B</sub> =2.5A			3.3	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =8A ; I <sub>B</sub> =2.5A			2.2	V
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =rated V <sub>CE</sub> ; V <sub>BE</sub> =0			1.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =8V; I <sub>C</sub> =0			1.0	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =2.5A ; V <sub>CE</sub> =10V	15			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =10V; f=1MHz	10			MHz

## Switching times

t <sub>r</sub>	Rise time	I <sub>C</sub> =5A ; I <sub>B1</sub> =-I <sub>B2</sub> =1.0A; V <sub>CC</sub> =250V			0.3	μs
t <sub>s</sub>	Storage time				1.8	μs
t <sub>f</sub>	Fall time				1.0	μs

PACKAGE OUTLINE

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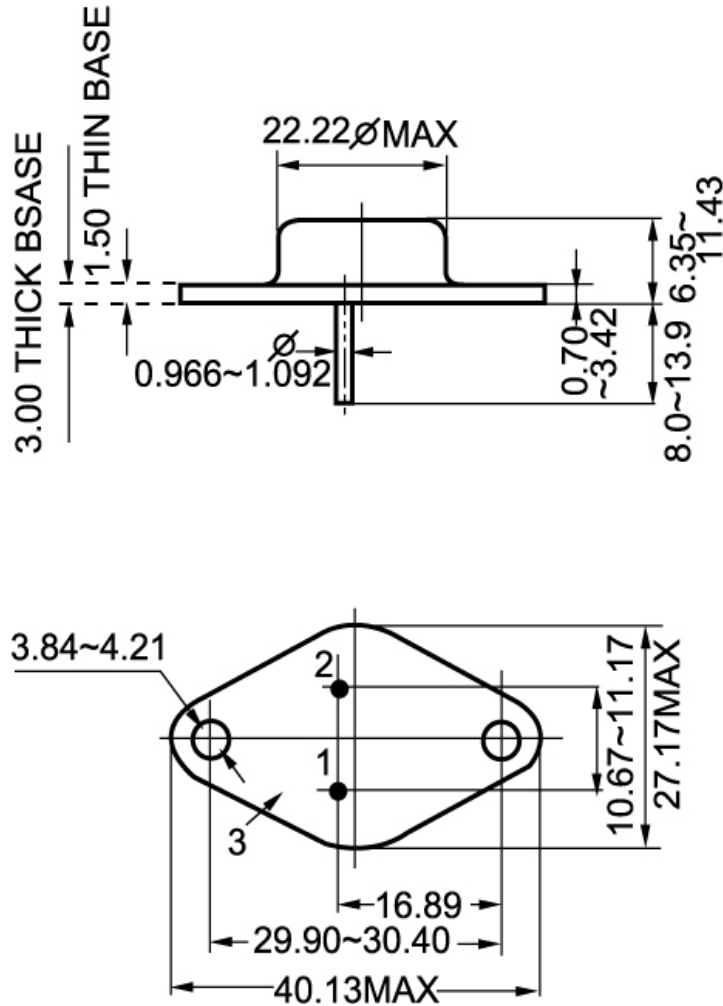


Fig.2 Outline dimensions