

**Silicon NPN Power Transistors**

**BDY56**

**DESCRIPTION**

- With TO-3 package
- High current capability
- Fast switching speed

**APPLICATIONS**

- LF large signal power amplification.

**PINNING (See Fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

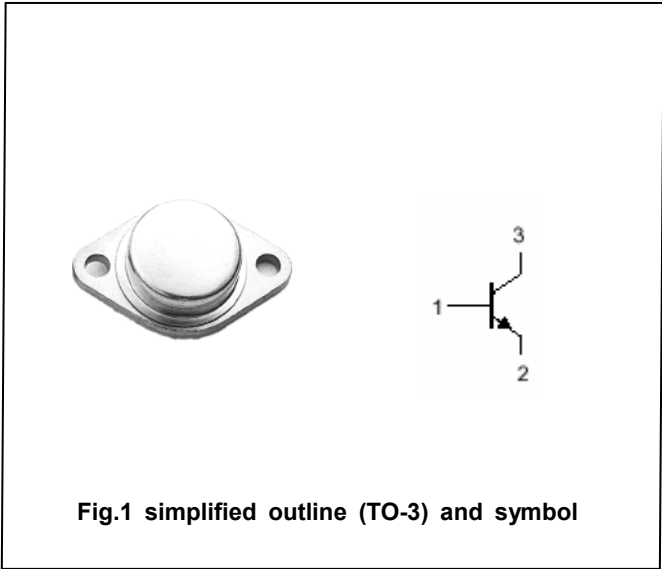


Fig.1 simplified outline (TO-3) and symbol

**Absolute maximum ratings(Ta=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	150	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	120	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	7	V
I <sub>C</sub>	Collector current		15	A
I <sub>B</sub>	Base current		7	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25°C	117	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	1.5	°C/W

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEQ(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.2A ; I <sub>B</sub> =0	120			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4A ; I <sub>B</sub> =0.4A			1.1	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A ; I <sub>B</sub> =3.3A			2.5	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =4 A; V <sub>CE</sub> =4V			1.8	V
I <sub>CEX</sub>	Collector cut-off current	V <sub>CE</sub> =150V; V <sub>BE</sub> =-1.5V T <sub>C</sub> =150°C			3.0 30	mA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =60V; I <sub>B</sub> =0			0.5	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =7V; I <sub>C</sub> =0			3.0	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =4A ; V <sub>CE</sub> =4V	20		70	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =10A ; V <sub>CE</sub> =4V	10			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =10A ; V <sub>CE</sub> =4V	10			MHz

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PACKAGE OUTLINE

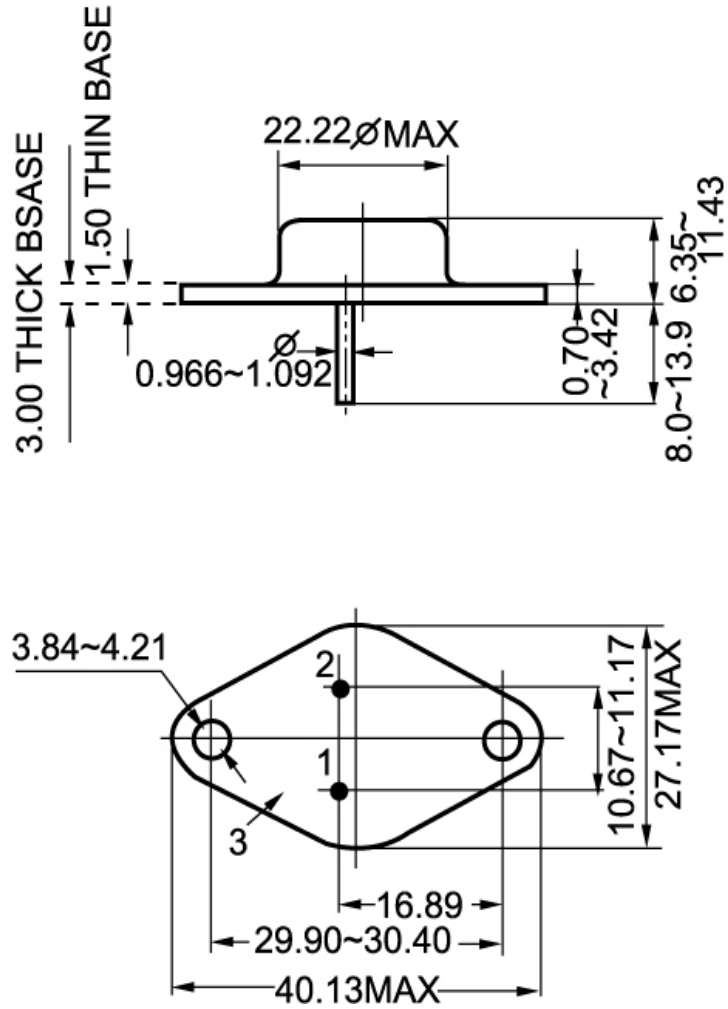


Fig.2 Outline dimensions