

## Silicon NPN Power Transistors 2N6338 2N6339 2N6340 2N6341

### DESCRIPTION

- With TO-3 package
- High DC current gain
- Fast switching times
- Low collector saturation voltage
- Complement to type 2N6436~38

### APPLICATIONS

- For use in industrial-military power amplifier and switching circuit applications

### PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

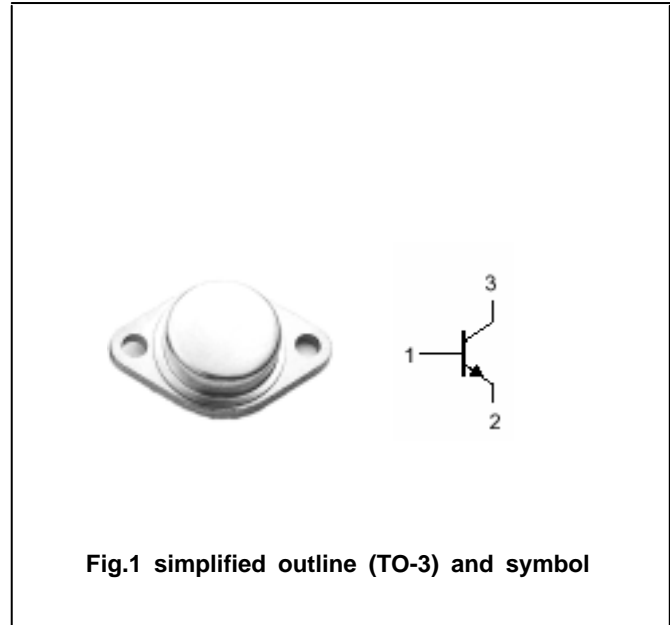


Fig.1 simplified outline (TO-3) and symbol

### Absolute maximum ratings(Ta= )

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT	
V <sub>CBO</sub>	Collector-base voltage	Open emitter	2N6338	120	V
			2N6339	140	
			2N6340	160	
			2N6341	180	
V <sub>CEO</sub>	Collector-emitter voltage	Open base	2N6338	100	V
			2N6339	120	
			2N6340	140	
			2N6341	150	
V <sub>EBO</sub>	Emitter-base voltage	Open collector	6	V	
I <sub>C</sub>	Collector current		25	A	
I <sub>CM</sub>	Collector current-peak		50	A	
I <sub>BC</sub>	Base current		10	A	
P <sub>D</sub>	Total power dissipation	T <sub>C</sub> =25	200	W	
T <sub>j</sub>	Junction temperature		200		
T <sub>stg</sub>	Storage temperature		-65~200		

### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	0.875	/W

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**CHARACTERISTICS**T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(SUS)CEO</sub>	Collector-emitter sustaining voltage	2N6338	I <sub>C</sub> =50mA ; I <sub>B</sub> =0			V
		2N6339				
		2N6340				
		2N6341				
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =1.0A			1.0	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =25A; I <sub>B</sub> =2.5A			1.8	V
V <sub>BE sat-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =1.0A			1.8	V
V <sub>BE sat-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =25A; I <sub>B</sub> =2.5A			2.5	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =10A ; V <sub>CE</sub> =2V			1.8	V
I <sub>CEX</sub>	Collector cut-off current	V <sub>CE</sub> =Rated V <sub>CEO</sub> ; V <sub>EB</sub> =-1.5V T <sub>C</sub> =150			10 1.0	μ A mA
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =Rated V <sub>CB</sub> ; I <sub>E</sub> =0			10	μ A
I <sub>CEO</sub>	Collector cut-off current	2N6338			50	μ A
		2N6339				
		2N6340				
		2N6341				
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =6V; I <sub>C</sub> =0			100	μ A
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =0.5A ; V <sub>CE</sub> =2V	50			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =10A ; V <sub>CE</sub> =2V	30		120	
h <sub>FE-3</sub>	DC current gain	I <sub>C</sub> =25A ; V <sub>CE</sub> =2V	12			
C <sub>OB</sub>	Output capacitance	I <sub>E</sub> =0 ; V <sub>CB</sub> =10V;f=1MHz			300	pF
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =1A ; V <sub>CE</sub> =10V;f=10MHz	40			MHz

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PACKAGE OUTLINE

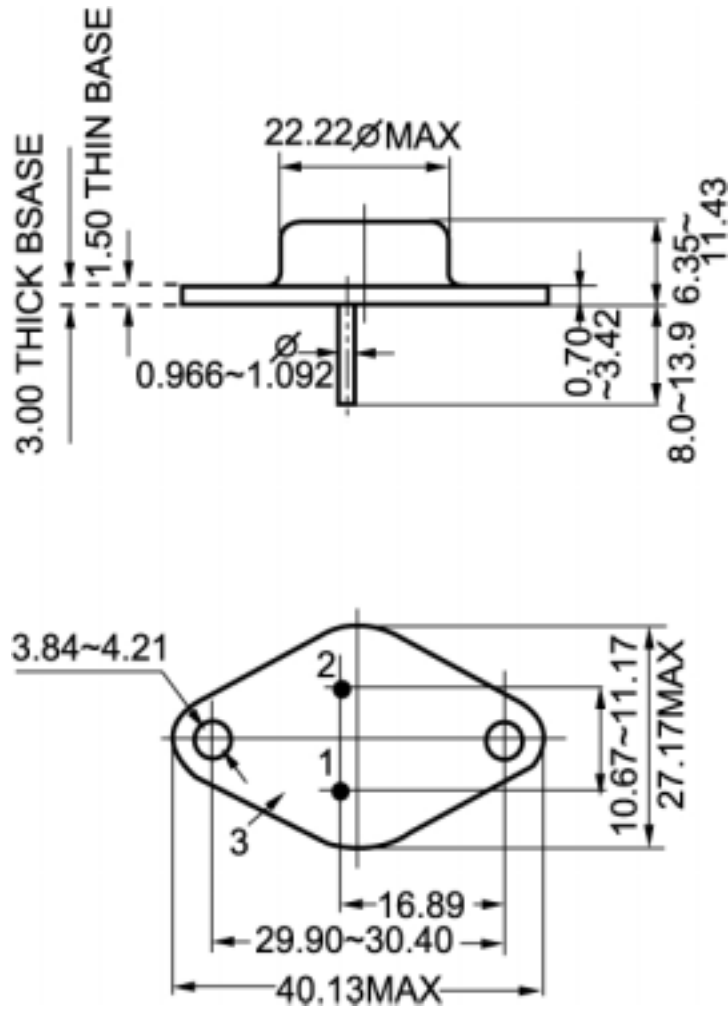


Fig.2 outline dimensions