

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

DESCRIPTION

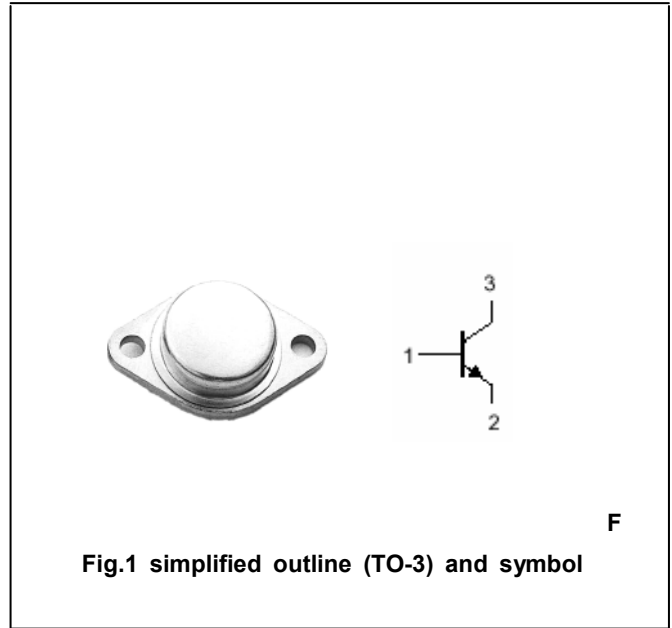
- With TO-3 package
- Fast switching times
- Low collector saturation voltage
- Complement to type 2N6436~38

APPLICATIONS

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

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



Absolute maximum ratings($T_a = \square$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N6338	120	V
		2N6339	140	
		2N6340	160	
		2N6341	180	
V_{CEO}	Collector-emitter voltage	2N6338	100	V
		2N6339	120	
		2N6340	140	
		2N6341	150	
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		25	A
I_{CM}	Collector current-peak		50	A
I_{BC}	Base current		10	A
P_D	Total power dissipation	$T_C = 25 \square$	200	W
T_j	Junction temperature		200	\square
T_{stg}	Storage temperature		-65~200	\square

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	0.875	\square/W

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{(SUS)CEO}	Collector-emitter sustaining voltage	2N6338	100			V	
		2N6339	120				
		2N6340	140				
		2N6341	150				
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =10A; I _B =1.0A			1.0	V	
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =25A; I _B =2.5A			1.8	V	
V _{BE sat-1}	Base-emitter saturation voltage	I _C =10A; I _B =1.0A			1.8	V	
V _{BE sat-2}	Base-emitter saturation voltage	I _C =25A; I _B =2.5A			2.5	V	
V _{BE}	Base-emitter on voltage	I _C =10A ; V _{CE} =2V			1.8	V	
I _{CEX}	Collector cut-off current	V _{CE} =Rated V _{CEO} ; V _{EB} =1.5V T _C =150°C			10 1.0	μA mA	
I _{CBO}	Collector cut-off current	V _{CB} =Rated V _{CB} ; I _E =0			10	μA	
I _{CEO}	Collector cut-off current	2N6338	V _{CE} = 50V, I _B =0			50	μA
		2N6339	V _{CE} = 60V, I _B =0				
		2N6340	V _{CE} = 70V, I _B =0				
		2N6341	V _{CE} = 75V, I _B =0				
I _{EBO}	Emitter cut-off current	V _{EB} =6V; I _C =0			100	μA	
h _{FE-1}	DC current gain	I _C =0.5A ; V _{CE} =2V	50				
h _{FE-2}	DC current gain	I _C =10A ; V _{CE} =2V	30		120		
h _{FE-3}	DC current gain	I _C =25A ; V _{CE} =2V	12				
C _{OB}	Output capacitance	I _E =0 ; V _{CB} =10V; f=0.1MHz			300	pF	
f _T	Transition frequency	I _C =1A ; V _{CE} =10V; f=10MHz	40			MHz	
t _r	Rise time	V _{CC} =80V, I _C =10A, I _{B1} =1A ; V _{BE} =1.5V			0.3	μs	
t _s	Storage time	V _{CC} =80V, I _C =10A, I _{B1} =I _{B2} =1A			1.0	μs	
t _f	Fall times				0.25	μs	

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PACKAGE OUTLINE

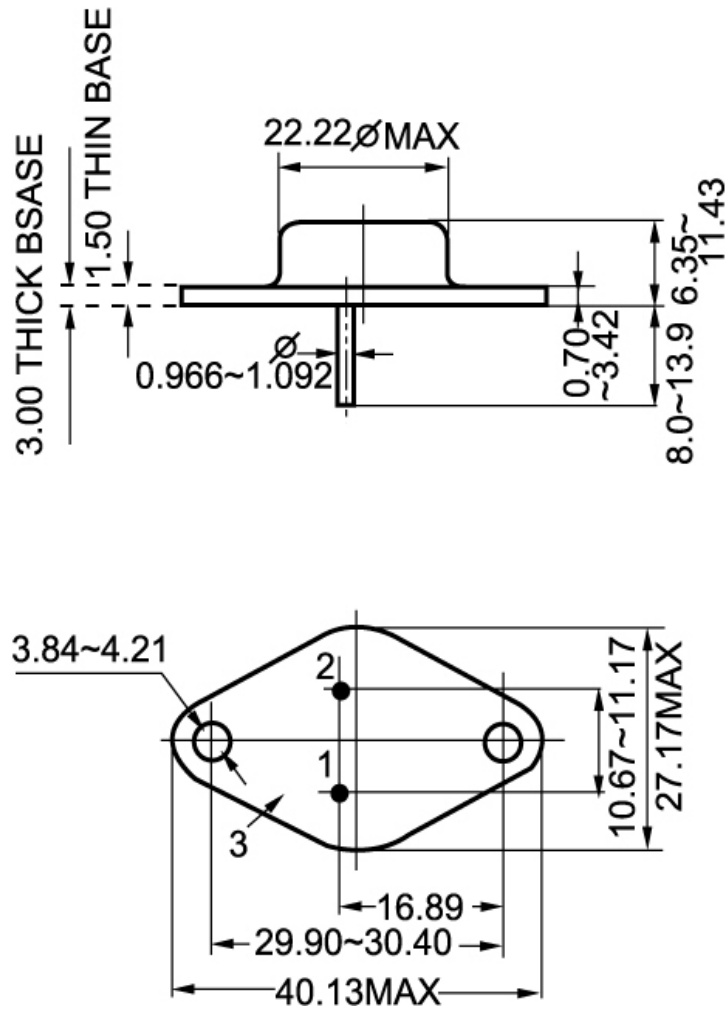


Fig.2 outline dimensions