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

DESCRIPTION

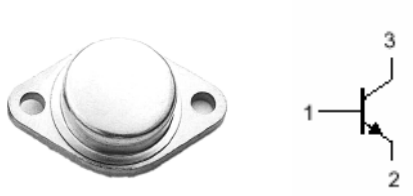
·With TO-3 package
·Fast switching times
·Low collector saturation voltage
·Complement to type 2N6436~38

APPLICATIONS

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

PINNING(see Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



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

Absolute maximum ratings(Ta=□)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	2N6338	Open emitter	120	V
		2N6339		140	
		2N6340		160	
		2N6341		180	
V_{CEO}	Collector-emitter voltage	2N6338	Open base	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□	200	W
T_j	Junction temperature			200	□
T_{stg}	Storage temperature			-65~200	□

THERMAL CHARACTERISTICS

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

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CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(SUS)CEO}$	Collector-emitter sustaining voltage	2N6338	I_C=50mA ;I_B=0	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□			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

PACKAGE OUTLINE

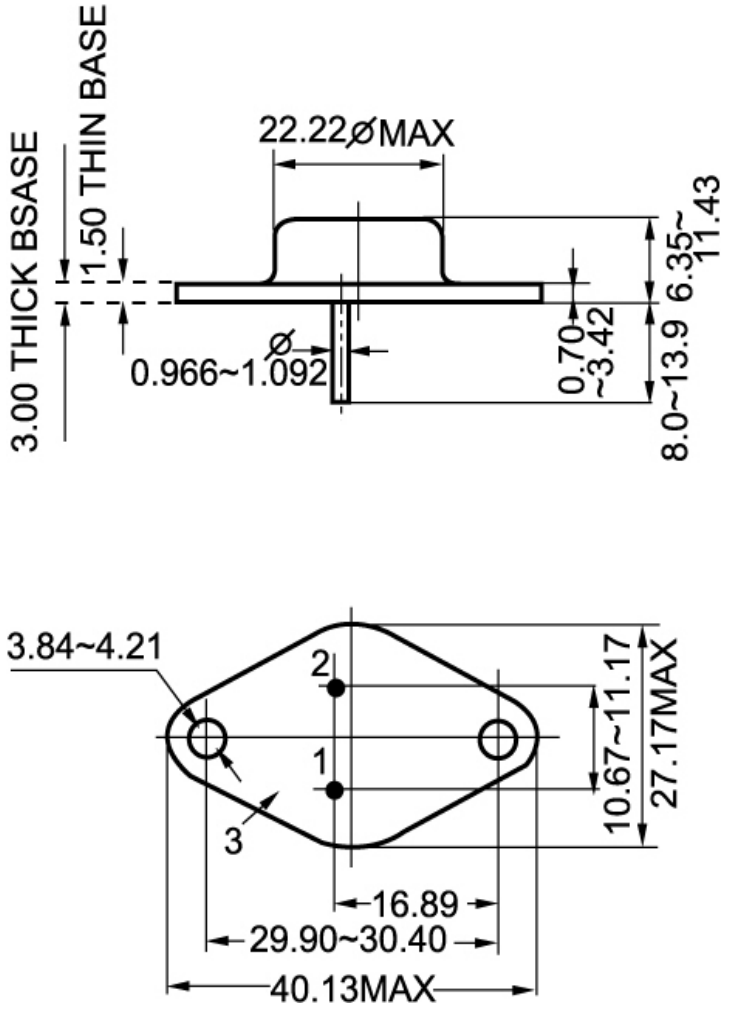


Fig.2 outline dimensions