Silicon NPN Power Transistors 2N5239

DESCRIPTION

- With TO-3 package
- High breakdown voltage
- High power dissipation

APPLICATIONS

- Switching regulator
- Inverters
- Power amplifiers
- Deflection circuits
- High-voltage bridge amplifiers

PINNING (See Fig.2)

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

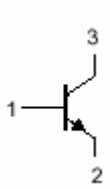

Fig.1 simplified outline (TO-3) and symbol

MAXIMUN RATINGS(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	300	V
V_{CEO}	Collector-emitter voltage	Open base	225	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		5	A
I_B	Base current		2	A
P_T	Total power dissipation	T_c=25℃	100	W
T_j	Junction temperature		200	℃
T_{stg}	Storage temperature		-65~200	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal resistance from junction to case	1.75	℃/W

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CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	I_C=0.2A ; I_B=0	225			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=20mA ; I_C=0	6			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	I_C=2A; I_B=0.25A			2.5	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	I_C=4.5A; I_B=1.125A			5.0	V
V_{BE}	Base-emitter on voltage	I_C=2A ; V_{CE}=10V			3.0	V
I_{CEV}	Collector cut-off current	V_{CE}=300V; V_{BE}=-1.5V T_C=150℃			4.0 5.0	mA
I_{CEO}	Collector cut-off current	V_{CE}=200V; I_B=0			5.0	mA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			5.0	mA
h_{FE-1}	DC current gain	I_C=0.4A ; V_{CE}=10V	20		80	
h_{FE-2}	DC current gain	I_C=2A ; V_{CE}=10V				
h_{FE-3}	DC current gain	I_C=4.5A ; V_{CE}=10V	5			
C_{OB}	Output capacitance	I_E=0 ; V_{CB}=10V;f=1MHz			250	pF
f_T	Transition frequency	I_C=0.2A ; V_{CE}=10V	2			MHz

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PACKAGE OUTLINE

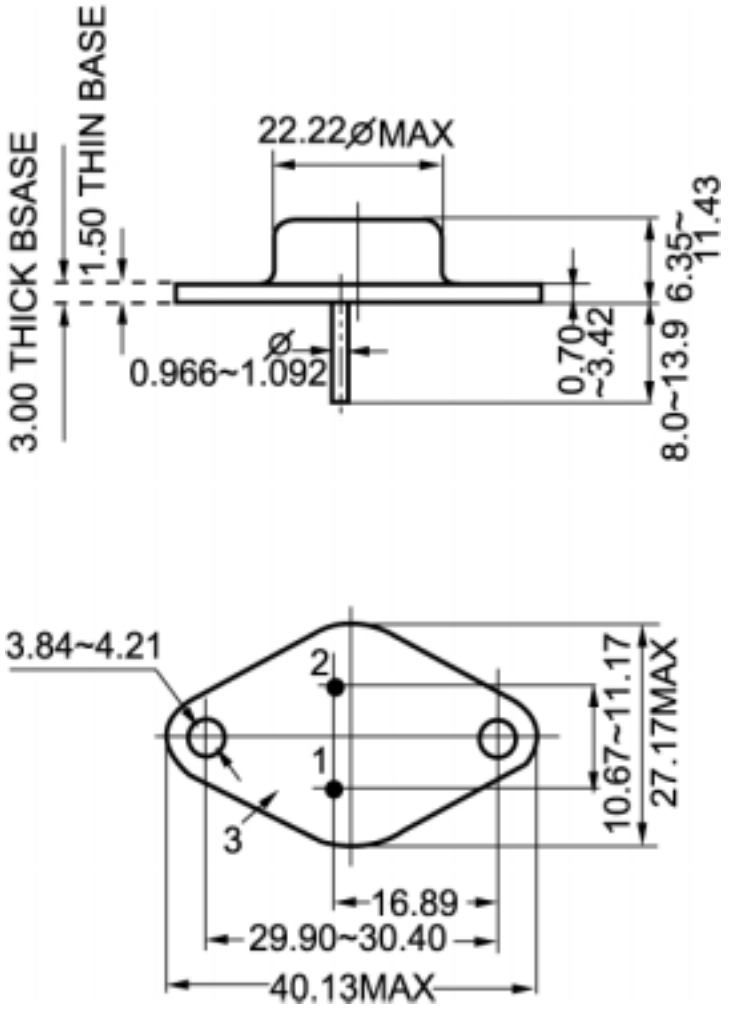

Fig.2 Outline dimensions