New Jersey Semi-Conductor Products, Inc.

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Silicon NPN Power Transistors

BUS14

DESCRIPTION

·With TO-3 package
·High voltage ,high speed

APPLICATIONS

·Converters
·Inverters
·Switching regulators
·Motor controls

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)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V_{CBO}	Collector-base voltage	Open emitter	850	V
V_{CEO}	Collector-emitter voltage	Open base	400	V
V_{EBO}	Emitter-base voltage	Open collector	9	V
I_C	Collector current		30	A
I_{CM}	Collector current-Peak		50	A
I_B	Base current		6	A
I_{BM}	Base current-Peak		10	A
P_T	Total power dissipation	T_{mb}=25	250	W
T_j	Junction temperature		200	
T_{stg}	Storage temperature		-65~200	

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j\text{-}mb}$	Thermal resistance from junction to mounting base	0.7	/W

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Quality Semi-Conductors

CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	I_C=0.1A ; I_B=0; L=25mH	400			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C=20A; I_B=4A			1.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C=20A; I_B=4A			1.7	V
I_{CES}	Collector cut-off current	V_{CE}=RatedBV$_{CEO}$; V_{BE}=0 T_C=125			1 5	mA
I_{EBO}	Emitter cut-off current	V_{EB}=9V; I_C=0			10	mA
h_{FE}	DC current gain	I_C=2A ; V_{CE}=5V	15		50	

Switching times

t_{on}	Turn-on time	I_C=20A; I_{B1}=- I_{B2}=4A			1.0	μs
t_s	Storage time				4.0	μs
t_f	Fall time				0.8	μs

PACKAGE OUTLINE

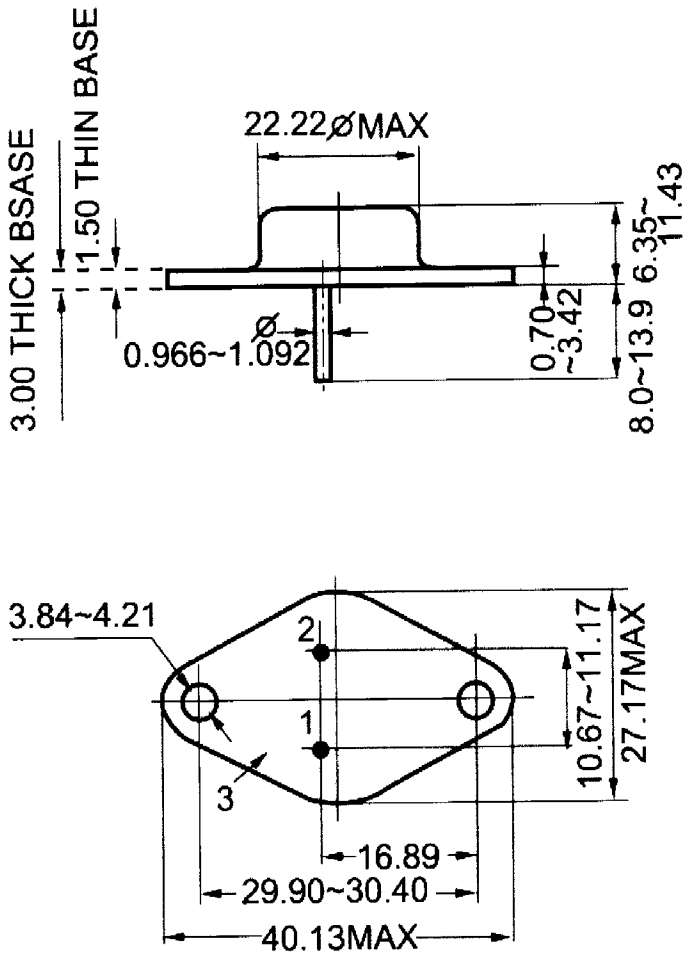

Fig.2 Outline dimensions