DESCRIPTION

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

APPLICATIONS

·For switching amplifiers,power gates, switching regulators,switching circuits converters,inverters and control circuits

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	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	120	V
V_{CEO}	Collector-emitter voltage	Open base	90	V
V_{EBO}	Emitter-base voltage	Open collector	7	V
I_C	Collector current		30	A
I_{CM}	Collector current-peak		40	A
I_B	Base current		6	A
P_T	Total power dissipation	T_C=25□	120	W
T_j	Junction temperature		150	□
T_{stg}	Storage temperature		-65~200	□

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}C}$	Thermal resistance junction to case	1.46	□/W

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;L=25mH	90			V
$V_{(BR)EBO}$	Emitter-base breakdown votage	I_E=50mA; I_C=0	7			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	I_C=12 A;I_B=1.2 A		0.7	1.2	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	I_C=20 A;I_B=2.5 A		1.25	1.6	V
V_{BEsat}	Emitter-base saturation voltage	I_C=20 A;I_B=2.5 A		2.1	2.5	V
I_{CEX}	Collector cut-off current	V_{CE}=120V; V_{BE}=-1.5V T_C=125℃			1.0 5.0	mA
I_{CEO}	Collector cut-off current	V_{CE}=70V; I_E=0			1.0	mA
I_{EBO}	Emitter cut-off current	V_{EB}=5V; I_C=0			1.0	mA
h_{FE-1}	DC current gain	I_C=12A ; V_{CE}=4V	15		45	
h_{FE-2}	DC current gain	I_C=20A ; V_{CE}=4V	8			
f_T	Transition frequency	I_C=1A ; V_{CE}=15V	8			MHz

Switching times

t_{on}	Turn-on time	I_C=20A ;I_{B1}=-I_{B2}=-2.5A V_{CC}=30V		0.80	1.5	μs
t_s	Storage time			0.55	1.0	μs
t_f	Fall time			0.15	0.3	μs

PACKAGE OUTLINE

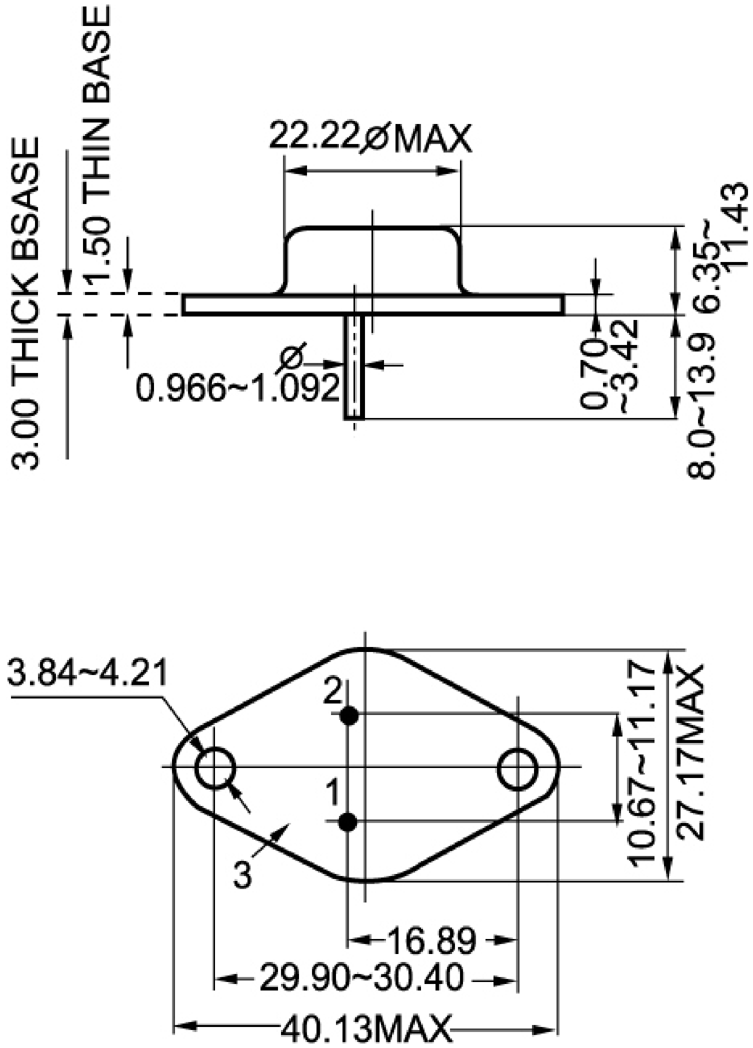

Fig.2 Outline dimensions