Silicon NPN Power Transistors BUX48 BUX48A

DESCRIPTION

·With TO-3 package
·High voltage capability
·High current capability
·Fast switching speed

APPLICATIONS

·Switch mode power supplies
·Transistor low power converters

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	BUX48	Open emitter	850	V
		BUX48A		1000	
V_{CEO}	Collector-emitter voltage	BUX48	Open base	400	V
		BUX48A		450	
V_{EBO}	Emitter-base voltage		Open collector	7	V
I_C	Collector current			15	A
I_{CM}	Collector current-peak			30	A
I_B	Base current			4	A
I_{BM}	Base current-peak			20	A
P_T	Total power dissipation		T_C=25□	175	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	1.0	□/W

CHARACTERISTICS

Tj=25□ unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	BUX48	I_C=0.2A ; L=25mH	400			V
		BUX48A		450			
$V_{(BR)EBO}$	Emitter-base breakdown voltage		I_E=50mA; I_C=0	7		30	V
$V_{CEsat-1}$	Collector-emitter saturation voltage	BUX48	I_C=10A; I_B=2A			1.5	V
		BUX48A	I_C=8A ;I_B=1.6A				
$V_{CEsat-2}$	Collector-emitter saturation voltage	BUX48	I_C=15A ;I_B=4A			3.5	V
		BUX48A	I_C=12A ;I_B=2.4A			5.0	
$V_{CEsat-3}$	Collector-emitter saturation voltage for BUX48		I_C=15A ;I_B=3A			5.0	V
V_{BEsat}	Base-emitter saturation voltage	BUX48	I_C=10A ;I_B=2A			1.6	V
		BUX48A	I_C=8A ;I_B=1.6A				
I_{CER}	Collector cut-off current		V_{CE}=rated V_{CER}; R_{BE}=10Ω T_C=125□			0.5 4	mA
I_{CES}	Collector cut-off current		V_{CE}=rated V_{CES}; V_{BE}=0 T_C=125□			0.2 2	mA
I_{EBO}	Emitter cut-off current		V_{EB}=5V; I_C=0			1	mA
h_{FE}	DC current gain		I_C=1A ; V_{CE}=5V	15		50	

Switching times resistive load

t_{on}	Turn-on time	for BUX48 I_C=10A ;I_{B1}=- I_{B2}=2A; V_{CC}=150V for BUX48A I_C=8A ;I_{B1}=- I_{B2}=1.6A; V_{CC}=150V			1.0	μs
t_s	Storage time				3.0	μs
t_f	Fall time				0.8	μs

PACKAGE OUTLINE

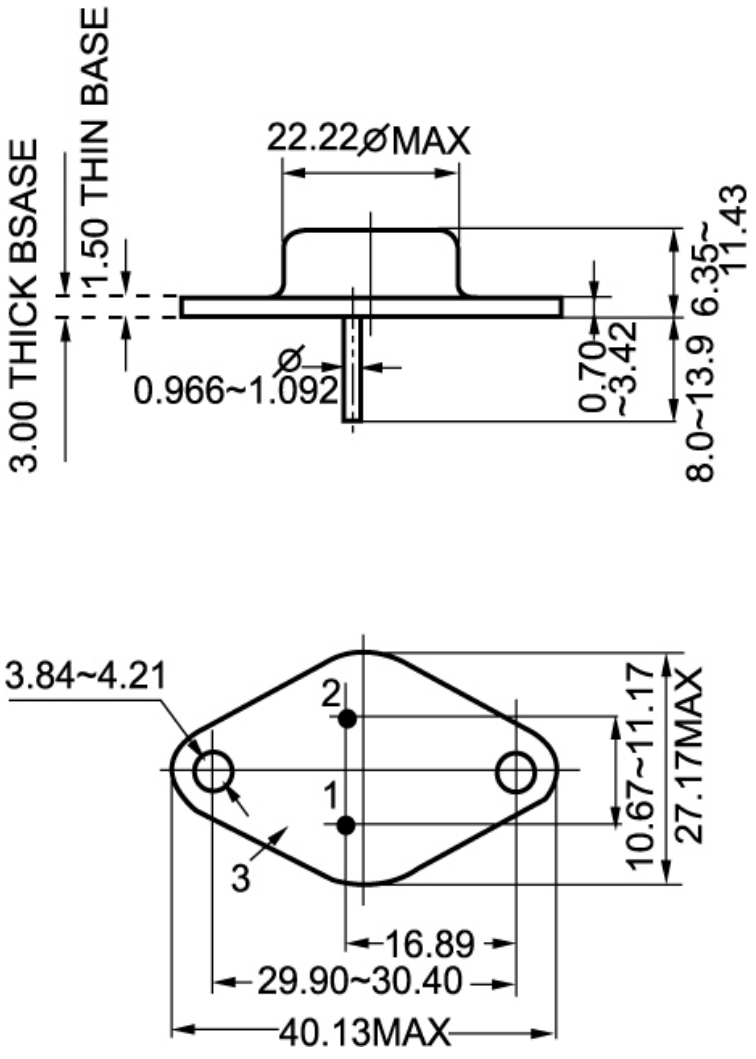

Fig.2 Outline dimensions