

Silicon NPN Power Transistors

BU508DX

DESCRIPTION

- With TO-3PML package
- High voltage,high speed
- Built-in damper diode

APPLICATIONS

- For use in horizontal deflection circuits of colour TV receivers.

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

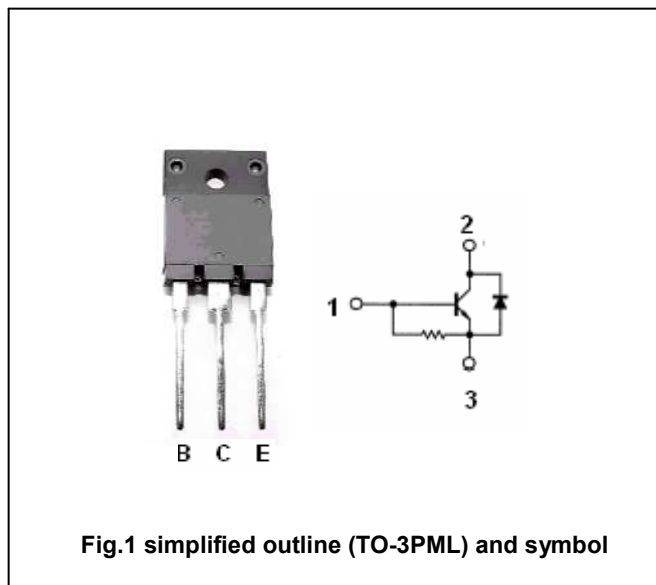


Fig.1 simplified outline (TO-3PML) and symbol

ABSOLUTE MAXIMUM RATINGS($T_C=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	1500	V
V_{CEO}	Collector-emitter voltage	Open base	700	V
I_C	Collector current (DC)		8	A
I_{CP}	Collector current (Pulse)		15	A
I_B	Base current (DC)		4	A
I_{BM}	Base current (Pulse)		6	A
P_{tot}	Total power dissipation	$T_C=25^\circ\text{C}$	45	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~150	$^\circ\text{C}$

Silicon NPN Power Transistors

BU508DX

CHARACTERISTICS

 $T_j=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEQ(SUS)}$	Collector-emitter sustaining voltage	$I_C=100\text{mA}$; $I_B=0$, $L=25\text{mH}$	700			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=4.5\text{A}$; $I_B=1.6\text{A}$			1.0	V
$V_{BE(sat)}$	Base-emitter saturation voltage	$I_C=4.5\text{A}$; $I_B=1.6\text{A}$			1.3	V
I_{CES}	Collector cut-off current	$V_{CE}=1500\text{V}$, $V_{BE}=0$ $T_j=125^\circ\text{C}$			1.0 2.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5.0\text{V}$; $I_C=0$			300	mA
h_{FE}	DC current gain	$I_C=0.5\text{A}$; $V_{CE}=5\text{V}$	10		30	
V_F	Diode forward voltage	$I_F=4.5\text{A}$		1.6	2.0	V
f_T	Transition frequency	$I_E=0.1\text{A}$; $V_{CE}=5\text{V}$		7		MHz
C_{OB}	Output capacitance	$V_{CB}=10\text{V}$; $I_E=0$; $f=1.0\text{MHz}$		125		pF

Silicon NPN Power Transistors

BU508DX

PACKAGE OUTLINE

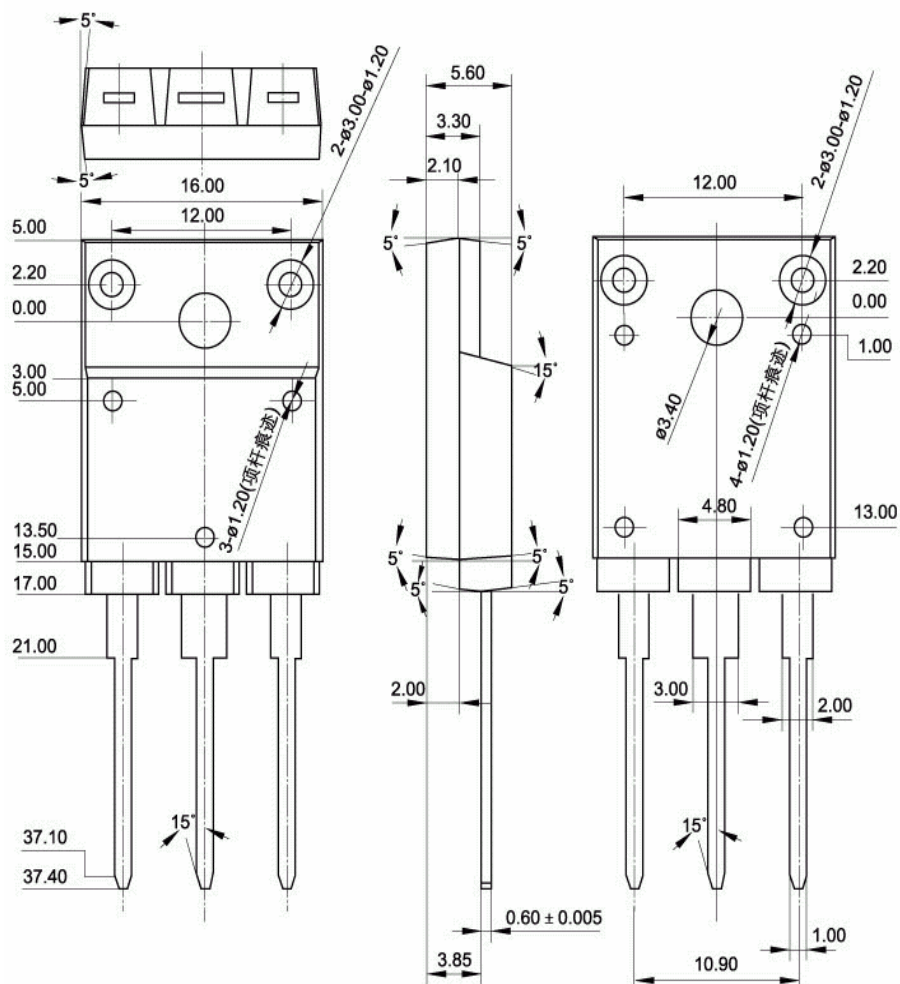


Fig.2 Outline dimensions