NPN BU508DF

SILICON DIFFUSED POWER TRANSISTOR

The BU508DF is a NPN epitaxial-base transistor in TO3PFa package with integrated efficiency diode.
It is intended for high voltage, high-speed.
Primarily for use in horizontal deflection circuits of colour television receivers.
Compliance to RoHS.

ABSOLUTE MAXIMUM RATINGS

Symbol	Ratings		Value	Unit
V_{CBO}	Collector-Base Voltage		1500	V
V_{CEO}	Collector-Emitter Voltage		700	V
V_{EBO}	Emitter-Base Voltage		5	V
I_C	Collector Current		8	A
I_{CM}	Collector Current Peak		15	A
I_B	Base Current		4	A
I_{BM}	Base Current Peak		6	A
P_T	Total Dissipation	@ T_{mb} < 25°	34	W
t_J	Junction Temperature		150	°C
t_s	Storage Temperature range		-65 to +150	

THERMAL CHARACTERISTICS

Symbol	Ratings	Conditions	Value		Unit
			Typ.	Max	
R_{thJC}	Junction To Heatsink	Without Heatsink Compound	-	3.7	K/W
	Junction To Heatsink	With Heatsink Compound	-	2.8	
	Junction Ambient	In Free Air	35	-	

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ELECTRICAL CHARACTERISTICS

TC=25°C unless otherwise noted

Symbol	Ratings	Test Condition(s)	Min	Typ	Max	Unit
V_{CEO}	Collector-Emitter Breakdown Voltage	I_C= 100 mA, I_B=0 L= 25mH	700	-	-	V
I_{CES}	Collector Cutoff Current	V_{BE} =0, V_{CE} = 1500 V	-	-	1	mA
		V_{BE} =0, V_{CE} = 1500 V T_j =125°C	-	-	2	
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5 V, I_C=0	-	-	300	mA
$V_{CE(SAT)}$	Collector-Emitter saturation Voltage	I_C= 4.5 A, I_B= 1.6 A	-	-	1	V
$V_{BE(SAT)}$	Base-Emitter saturation Voltage	I_C= 4.5 A, I_B= 2 A	-	-	1.1	
V_F	Diode Forwardvoltage	I_F= 4.5 A	-	1.6	2	V
h_{FE}	DC Current Gain	I_C= 500 mA, V_{CE} = 5 V	10	-	30	-
C_{OB}	Output Capacitance	VCB = 10 V, I_E=0, f= 1MHz	3	-	-	A
f_T	Transition Frequency	V_{CE}= 5 V, I_C= 100 mA	-	7	-	MHz

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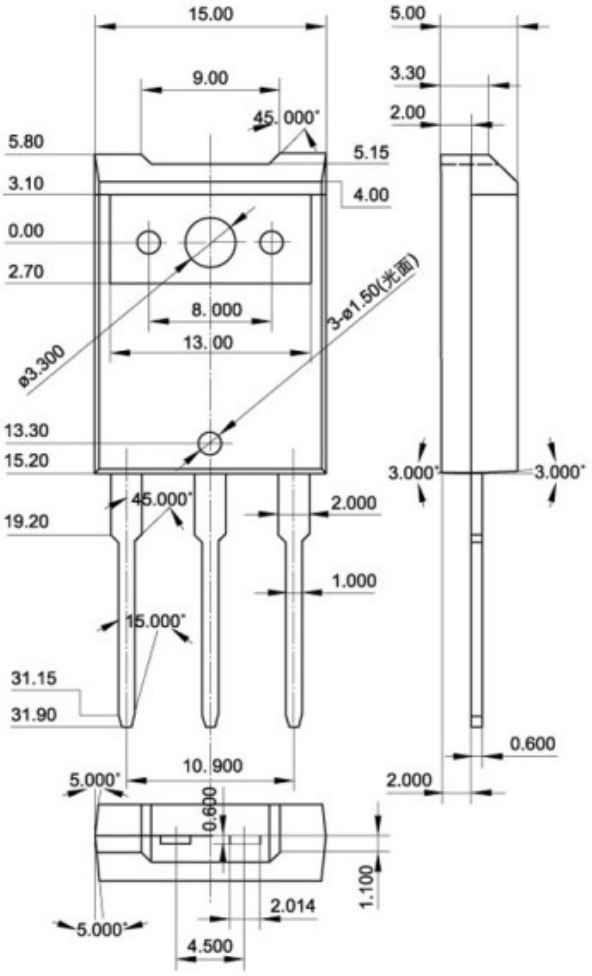
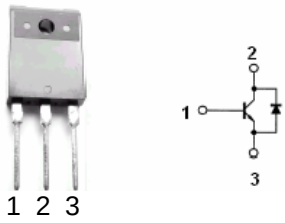
MECHANICAL DATA CASE TO3PFa



Pin 1 :	Base
Pin 2 :	Collector
Case :	Emitter
Case :	Isolated



Revised October 2012