

Silicon NPN Power Transistor

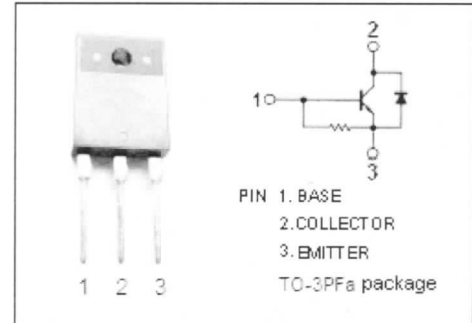
BU2520DF

DESCRIPTION

- High Switching Speed
- High Voltage
- Built-in Ddamper Ddiode

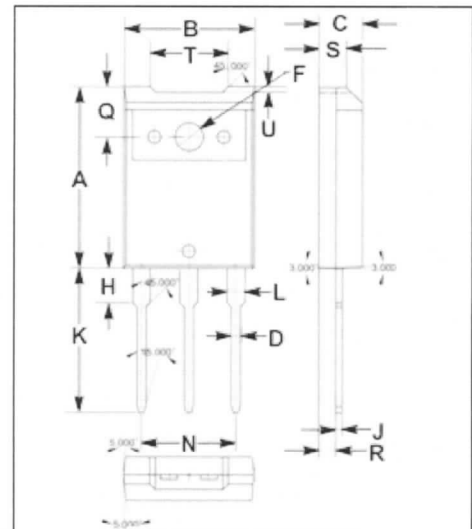
APPLICATIONS

- For use in horizontal deflection circuits of large screen color TV receivers



ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	1500	V
V _{CEO}	Collector-Emitter Voltage	800	V
V _{EBO}	Emitter-Base Voltage	7.5	V
I _C	Collector Current-Continuous	10	A
I _{CM}	Collector Current-peak	25	A
I _B	Base Current-Continuous	6	A
I _{BM}	Base Current-peak	9	A
P _C	Collector Power Dissipation @T _C =25°C	45	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



DIM	mm	
	MIN	MAX
A	20.70	21.30
B	14.70	15.30
C	4.80	5.20
D	0.90	1.10
F	3.20	3.40
H	3.70	4.30
J	0.50	0.70
K	16.40	17.00
L	1.90	2.10
N	10.80	11.00
Q	5.60	6.00
R	1.80	2.20
S	3.10	3.50
T	8.70	9.30
U	0.55	0.75

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	2.8	K/W

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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 100mA; I _B = 0, L= 25mH	800			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 600mA; I _C = 0	7.5	13.5		V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 6A; I _B = 1.2A			5.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 6A; I _B = 1.2A			1.1	V
I _{CES}	Collector Cutoff Current	V _{CE} = BV _{CES} ; V _{BE} = 0 V _{CE} = BV _{CES} ; V _{BE} = 0; T _C =125°C			1.0 2.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 7.5V; I _C = 0	100		300	mA
h _{FE-1}	DC Current Gain	I _C = 1A; V _{CE} = 5V		13		
h _{FE-2}	DC Current Gain	I _C = 6A; V _{CE} = 5V	5	7	9.5	
V _{ECF}	C-E Diode Forward Voltage	I _F = 6A			2.2	V
C _{OB}	Output Capacitance	I _E = 0 ; V _{CB} = 10V; f _{test} = 1MHz		115		pF

Switching times (16kHz line deflection circuit)

t _{stg}	Storage Time	I _C = 6A, I _{B(end)} = 1.0A; L _B = 5.3 μ H; L _C = 650 μ H; C _{fb} = 19nF; -V _{BB} = 4V; (-di _B /dt= 0.8A/μ s)			5.5	μ s
t _f	Fall Time				0.5	μ s