

isc Silicon NPN Power Transistor

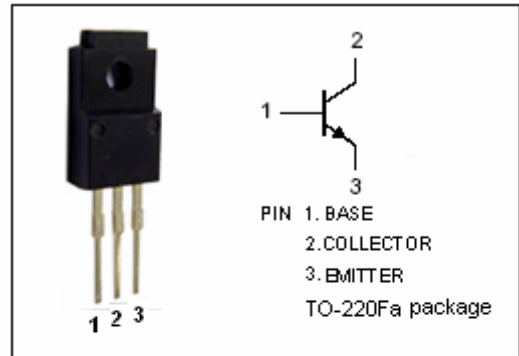
BU506F

DESCRIPTION

- High Voltage
- High Switching Speed

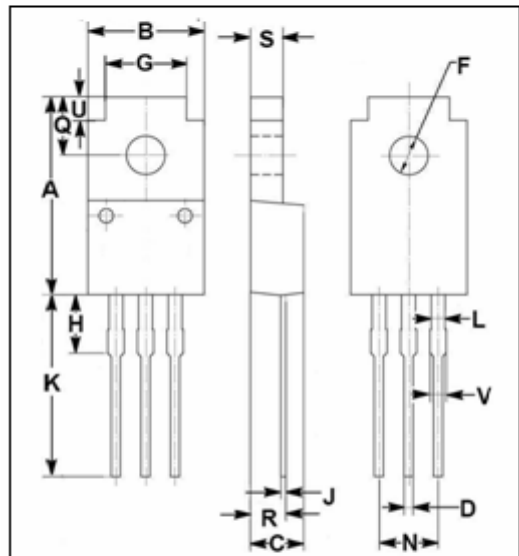
APPLICATIONS

- Designed for use in horizontal deflection circuits of color TV receivers and in line-operated switch-mode applications



ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CES}	Collector-Emitter Voltage-V _{BE} =0	1500	V
V _{CEO}	Collector-Emitter Voltage	700	V
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current-Continuous	5	A
I _{CM}	Collector Current-Peak	8	A
I _B	Base Current-Continuous	3	A
I _{BM}	Base Current-Peak	5	A
P _C	Collector Power Dissipation @ T _C =25°C	20	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-65~150	°C



DIM	mm	
	MIN	MAX
A	16.85	17.15
B	9.90	10.10
C	4.35	4.65
D	0.75	0.80
F	3.20	3.40
G	6.90	7.10
H	5.15	5.45
J	0.45	0.75
K	13.35	13.65
L	1.10	1.30
N	4.98	5.18
Q	4.85	5.15
R	2.95	3.25
S	2.70	2.90
U	1.75	2.05
V	1.30	1.50

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal Resistance, Junction to Case	6.35	°C/W
R _{th j-a}	Thermal Resistance, Junction to Ambient	55	°C/W

isc Silicon NPN Power Transistor**BU506F****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	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	$I_C= 3\text{A}$; $I_B= 1.33\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 3\text{A}$; $I_B= 1.33\text{A}$			1.3	V
I_{CES}	Collector Cutoff Current	$V_{CE}= V_{CESmax}$; $V_{BE}= 0$ $V_{CE}= V_{CESmax}$; $V_{BE}= 0$; $T_J= 125^{\circ}\text{C}$			0.5 1	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 6\text{V}$; $I_C= 0$			10	mA
h_{FE}	DC Current Gain	$I_C= 3\text{A}$; $V_{CE}= 5\text{V}$	2.25			

Switching Times; Resistive load

t_{stg}	Storage Time	$I_C= 3\text{A}$, $I_{B(end)}= 1\text{A}$; $L_B= 12\ \mu\text{H}$		6.5		μs
t_f	Fall Time			0.7		μs