

Silicon NPN Power Transistor

BU506F

DESCRIPTION

- High Voltage
- High Switching Speed

APPLICATIONS

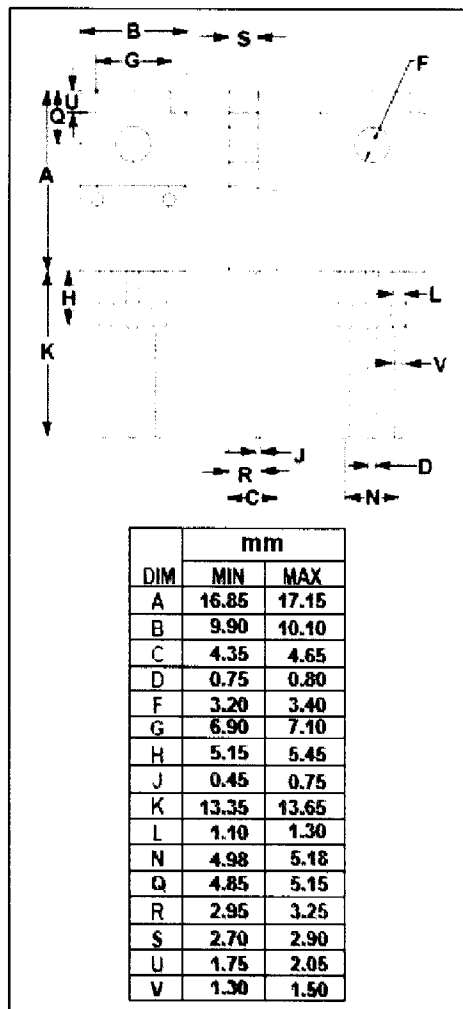
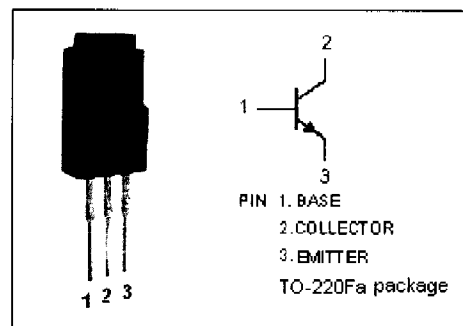
- Designed for use in horizontal deflection circuits of color TV receivers and in line-operated switch-mode applications

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

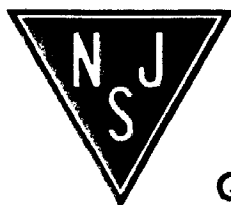
SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage- $V_{BE}=0$	1500	V
V_{CEO}	Collector-Emitter Voltage	700	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	5	A
I_{CM}	Collector Current-Peak	8	A
I_B	Base Current-Continuous	3	A
I_{BM}	Base Current-Peak	5	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	20	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	6.35	$^\circ\text{C/W}$
$R_{th\ j-a}$	Thermal Resistance, Junction to Ambient	55	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$ 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	$I_C=3\text{A}$; $I_B=1.33\text{A}$			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