New Jersey Semi-Conductor Products, Inc.

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Silicon NPN Power Transistor

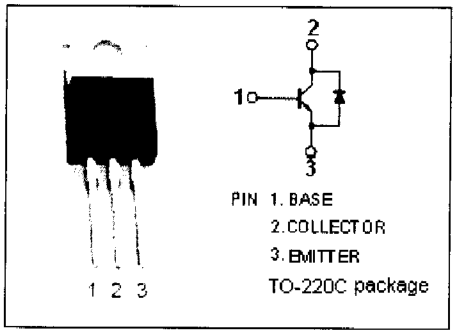
BU506D

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

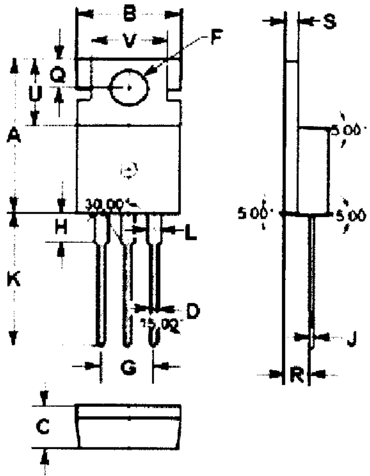


ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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℃	100	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}c}$	Thermal Resistance,Junction to Case	1.25	℃/W



	mm	
DIM	MIN	MAX
A	15.70	15.90
B	9.90	10.10
C	4.20	4.40
D	0.70	0.90
F	3.40	3.60
G	4.98	5.18
H	2.70	2.90
J	0.44	0.46
K	13.20	13.40
L	1.10	1.30
Q	2.70	2.90
R	2.50	2.70
S	1.29	1.31
U	6.45	6.65
V	8.66	8.86

Quality Semi-Conductors

ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C= 100mA; I_B= 0	700			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 3A; I_B= 1.33A			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 3A; I_B= 1.33A			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℃			0.5 1.0	mA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0			10	mA
V_{ECF}	C-E Diode Forward Voltage	I_F= 3A			2.2	V
h_{FE}	DC Current Gain	I_C= 0.1A; V_{CE}= 5V	6		30	

Switching Times; Resistive load

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