

INCHANGE Semiconductor

isc Product Specification

isc Silicon NPN Power Transistor

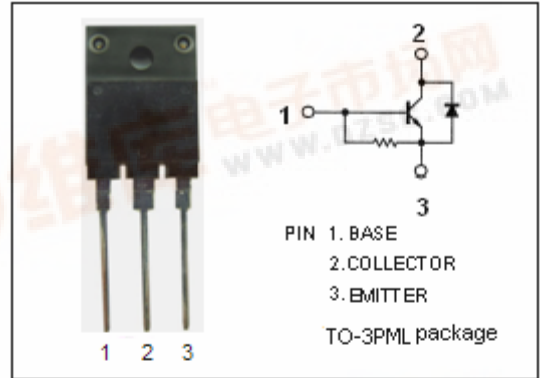
BUH315D

DESCRIPTION

- High Switching Speed
- High Voltage
- Built-in Integrated Diode

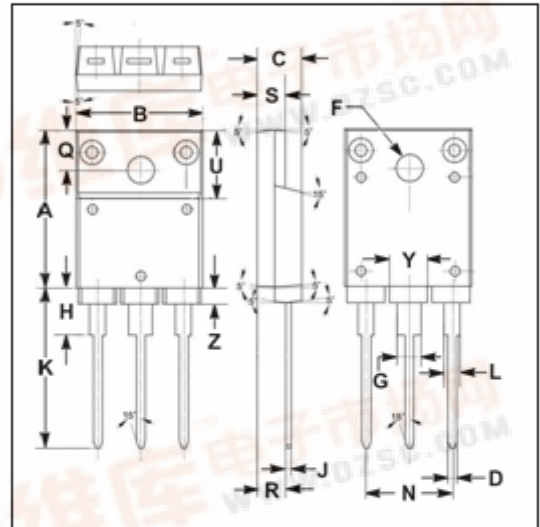
APPLICATIONS

- Designed for use in horizontal deflection circuits in TV's and monitors.



ABSOLUTE MAXIMUM RATINGS(T<sub>a</sub>=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V <sub>CBO</sub>	Collector-Base Voltage	1500	V
V <sub>CEO</sub>	Collector-Emitter Voltage	700	V
V <sub>EBO</sub>	Emitter-Base Voltage	10	V
I <sub>C</sub>	Collector Current-Continuous	6	A
I <sub>CM</sub>	Collector Current-Peak	12	A
I <sub>B</sub>	Base Current	3	A
I <sub>BM</sub>	Base Current-Peak	5	A
P <sub>C</sub>	Collector Power Dissipation @T <sub>C</sub> =25°C	44	W
T <sub>J</sub>	Junction Temperature	150	°C
T <sub>stg</sub>	Storage Temperature	-65~150	°C



DIM	mm	
	MIN	MAX
A	19.90	20.10
B	15.90	16.10
C	5.50	5.70
D	0.90	1.10
F	3.30	3.50
G	2.90	3.10
H	5.90	6.10
J	0.595	0.605
K	22.30	22.50
L	1.90	2.10
N	10.80	11.00
Q	4.90	5.10
R	3.75	3.95
S	3.20	3.40
U	9.90	10.10
Y	4.70	4.90
Z	1.90	2.10

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal Resistance, Junction to Case	2.8	°C/W



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## ELECTRICAL CHARACTERISTICS

 $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$V_{CE(SUS)}$	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	$I_C=3\text{A}; I_B=1\text{A}$			1.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=3\text{A}; I_B=1\text{A}$			1.5	V
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			300	mA
$I_{CES}$	Collector Cutoff Current	$V_{CE}=1500\text{V}; V_{BE}=0$			0.2	mA
$h_{FE}$	DC Current Gain	$I_C=3\text{A}; V_{CE}=5\text{V}$ $I_C=3\text{A}; V_{CE}=5\text{V}; T_C=100^{\circ}\text{C}$	4 2.5		9	
$V_{ECF}$	C-E Diode Forward Voltage	$I_F=3\text{A}$			2.5	V

Switching Times; Resistive Load

$t_s$	Storage Time	$I_C=3\text{A}; I_{B1}=1\text{A}; I_{B2}=-1.5\text{A}$ $V_{CC}=400\text{V}$		1.8	2.7	$\mu\text{s}$
$t_f$	Fall Time			0.2	0.3	$\mu\text{s}$