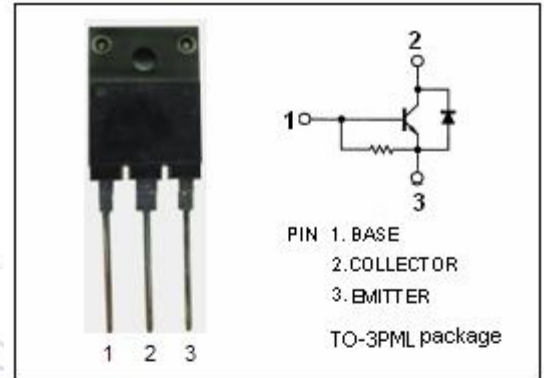


isc Silicon NPN Power Transistors
BU508DF
DESCRIPTION

- High Switching Speed
- High Voltage
- Built-in Integrated Diode
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

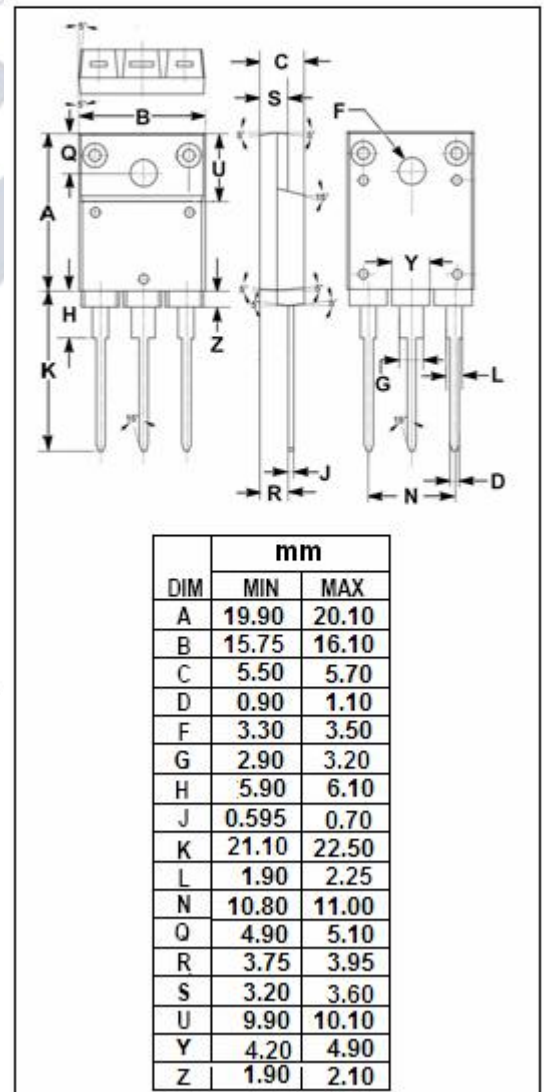
- Designed for use in horizontal deflection circuits of colour TV receivers.


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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1500	V
V_{CEO}	Collector-Emitter Voltage	700	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	8	A
I_{CM}	Collector Current-Peak	15	A
I_B	Base Current	4	A
I_{BM}	Base Current-Peak	6	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	34	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-65~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	3.7	K/W



isc Silicon NPN Power Transistor**BU508DF****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	$I_C=50\text{mA}; I_B=0$	700			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=4.5\text{A}; I_B=1.6\text{A}$			1.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=4.5\text{A}; I_B=2\text{A}$			1.1	V
I_{EBO}	Emitter Cutoff Current	$V_{EB}=5\text{V}; I_C=0$			300	mA
I_{CES}	Collector Cutoff Current	$V_{CB}=BV_{CBO}; I_E=0$ $V_{CB}=BV_{CBO}; I_E=0; T_C=125^{\circ}\text{C}$			1.0 2.0	mA
h_{FE}	DC Current Gain	$I_C=0.1\text{A}; V_{CE}=5\text{V}$	6		30	
f_T	Current-Gain—Bandwidth Product	$I_C=0.1\text{A}; V_{CE}=5\text{V}$		7		MHz
C_{OB}	Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f_{test}=1\text{MHz}$		125		pF
V_{ECF}	C-E Diode Forward Voltage	$I_F=4.5\text{A}$		1.6	2.0	V

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