

isc Silicon NPN Power Transistor
BU500
DESCRIPTION

- High Voltage- $V_{CEX} = 1500V(\text{Min.})$
- Low Collector Saturation Voltage-
: $V_{CE(\text{sat})} = 1.0V(\text{Max.}) @ I_C = 4.5A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

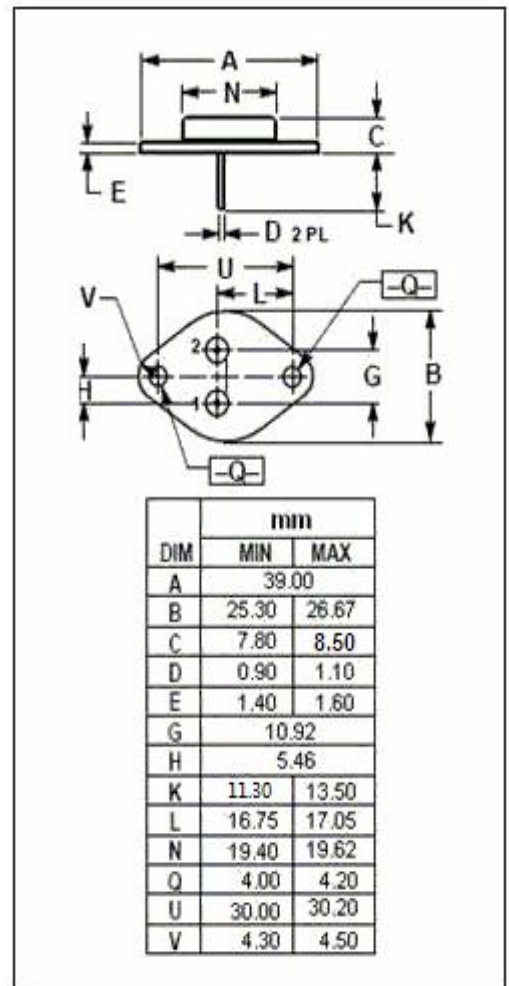
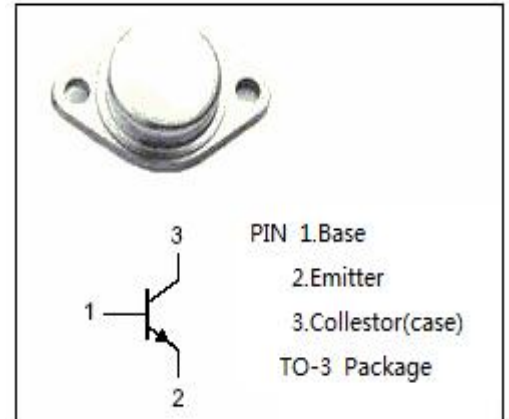
- Designed for use in large screen color deflection circuits .

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	1300	V
V_{CEX}	Collector-Emitter Voltage	1300	V
V_{CEO}	Collector-Emitter Voltage	700	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	6	A
I_{CM}	Collector Current-Peak	16	A
I_B	Base Current-Continuous	4	A
P_C	Collector Power Dissipation @ $T_c = 25^\circ\text{C}$	75	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	1.66	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**BU500****ELECTRICAL CHARACTERISTICS**T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = 50mA; I _B = 0	700			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 100mA; I _C = 0	5			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 4.5A; I _B = 2A			1.0	V
V _{BE(on)}	Base-Emitter On Voltage	I _C = 4.5A; V _{CE} = 2V			1.3	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 1000V; I _E = 0 V _{CB} = 1300V; I _E = 0			0.02 1.0	mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 4V; I _C = 0			10	mA
h _{FE}	DC Current Gain	I _C = 4.5A; V _{CE} = 5V	3			

Switching Times

t _s	Storage Time	I _C = 4.5A; I _{B1} = -I _{B2} = 1.5A; V _{CC} = 100V			1.2	μs
t _f	Fall Time				1.0	μs

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