

isc Silicon NPN Power Transistor
BU104
DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 150V(\text{Min.})$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = 2.5V(\text{Max.}) @ I_C = 7A$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

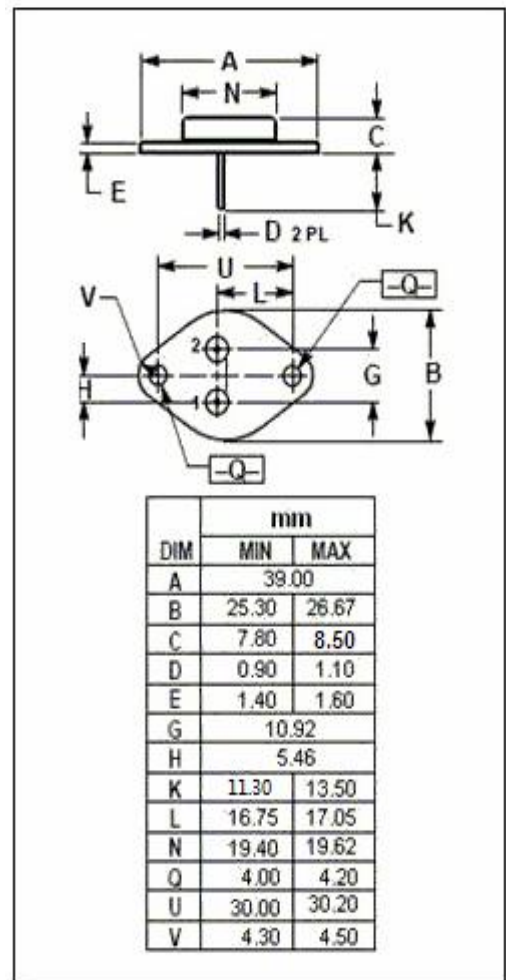
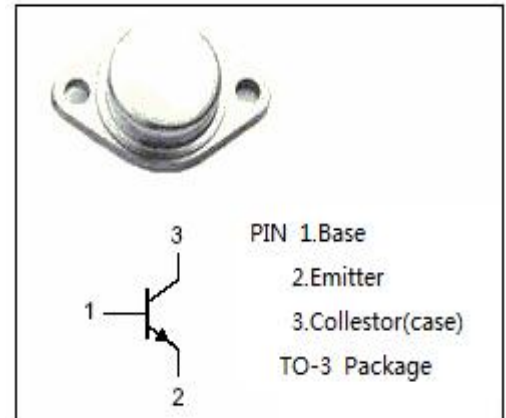
- Designed for use in horizontal deflexion output stage of B/W TV receivers.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	400	V
V_{CEO}	Collector-Emitter Voltage	150	V
V_{CEX}	Collector-Emitter Voltage $V_{BE} = -5V$	400	V
V_{EBO}	Emitter-Base Voltage	10	V
I_C	Collector Current-Continuous	7	A
I_{CM}	Collector Current-Peak Repetitive	15	A
I_B	Base Current-Continuous	3	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	85	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	2.0	$^\circ\text{C/W}$



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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C=50\text{mA}; I_B=0$	150			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=7\text{A}; I_B=1\text{A}$			2.5	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=7\text{A}; I_B=1\text{A}$			2.5	V
I_{CBO}	Collector Cutoff Current	$V_{CB}=250\text{V}; I_E=0$			0.5	mA
I_{CEX}	Collector Cutoff Current	$V_{CE}=400\text{V}; V_{BE}=-5\text{V}$			1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}=10\text{V}; I_C=0$			10	mA
h_{FE}	DC Current Gain	$I_C=5\text{A}; V_{CE}=1.75\text{V}$	10		50	
f_T	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=10\text{V}$		10		MHz

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