

**Silicon NPN Power Transistor**

**BU104**

**DESCRIPTION**

- Collector-Emitter Breakdown Voltage-  
 :  $V_{(BR)CEO} = 150V(\text{Min.})$
- Low Collector Saturation Voltage-  
 :  $V_{CE(sat)} = 2.5V(\text{Max.}) @ I_C = 7A$

**APPLICATIONS**

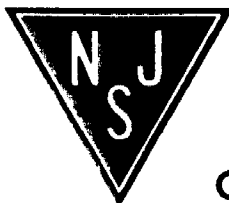
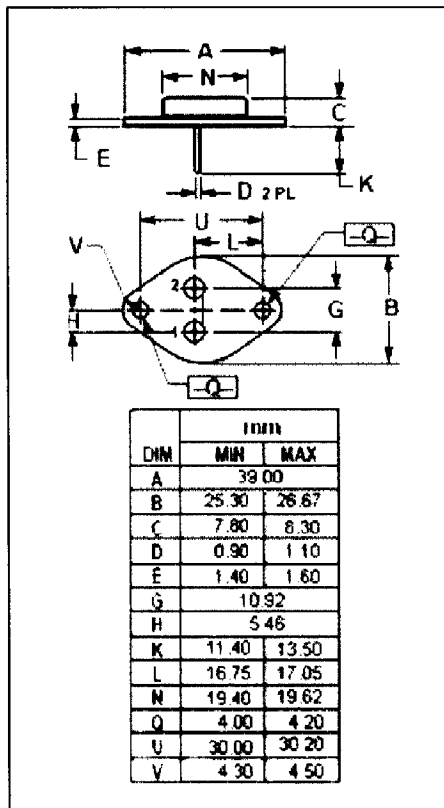
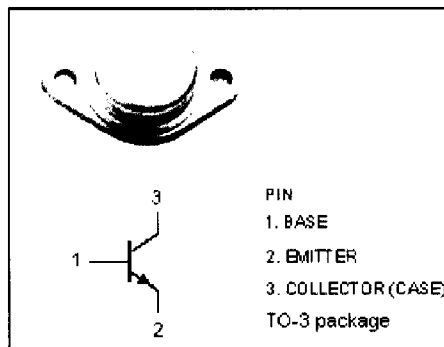
- Designed for use in horizontal deflexion output stage of BW TV receivers.

**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	200	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range	-65~200	$^\circ\text{C}$

**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