

**Silicon NPN Power Transistors**

**BU113**

**DESCRIPTION**

- Collector-Emitter Voltage-  
 $V_{CEX(SUS)} = 700V(\text{Min.})$
- Collector Current-  $I_C = 10A$

**APPLICATIONS**

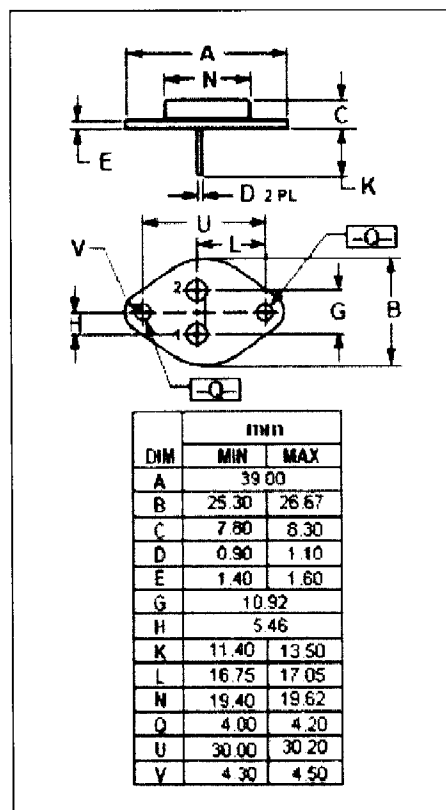
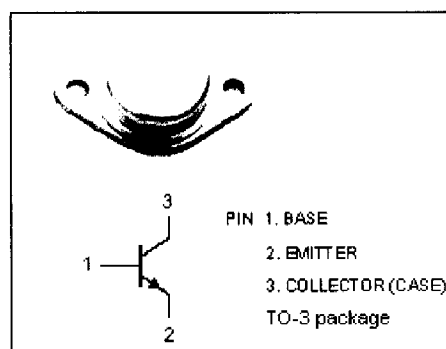
- Designed for use in horizontal deflection output state of color TV receivers.

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

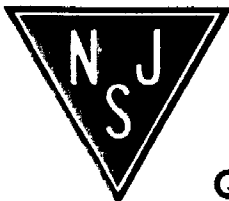
SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Emitter Voltage	700	V
$V_{CEX}$	Collector-Emitter Voltage $V_{BE} = -5V$	700	V
$V_{EBO}$	Emitter-Base Voltage	10	V
$I_C$	Collector Current-Continuous	10	A
$I_B$	Base Current-Continuous	4	A
$P_C$	Collector Power Dissipation @ $T_c = 90^\circ\text{C}$	30	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	$^\circ\text{C/W}$



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.



## Silicon NPN Power Transistors

**BU113**

### ELECTRICAL CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)EBO}$	Collector-Base Breakdown Voltage	$I_E=30\text{mA}; I_C=0$	10			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=10\text{A}; I_B=2\text{A}$			3.0	V
$I_{CEX}$	Collector Cutoff Current	$V_{CE}=250\text{V}; V_{BE}=-5\text{V}$ $V_{CE}=700\text{V}; V_{BE}=-5\text{V}$			2.0 10	mA
$h_{FE}$	DC Current Gain	$I_C=8\text{A}; V_{CE}=2\text{V}$	7			
$f_T$	Current-Gain—Bandwidth Product	$I_C=0.5\text{A}; V_{CE}=4\text{V}$		6		MHz
$C_{OB}$	Collector Output Capacitance	$I_E=0; V_{CB}=10\text{V}; f=1\text{MHz}$		250		pF
$t_f$	Fall Time	$I_C=8\text{A}; I_{B1}=-I_{B2}=1.6\text{A}$			1.0	$\mu\text{s}$