

isc Silicon NPN Power Transistor

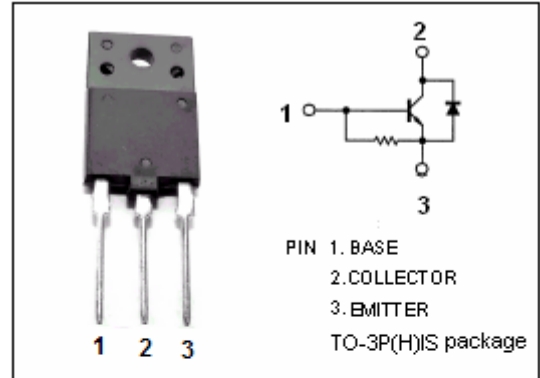
BU2506DX

DESCRIPTION

- Collector-Emitter Sustaining Voltage-  
:  $V_{CEO(SUS)} = 700V$  (Min)
- High Switching Speed
- Built-in Damper Diode

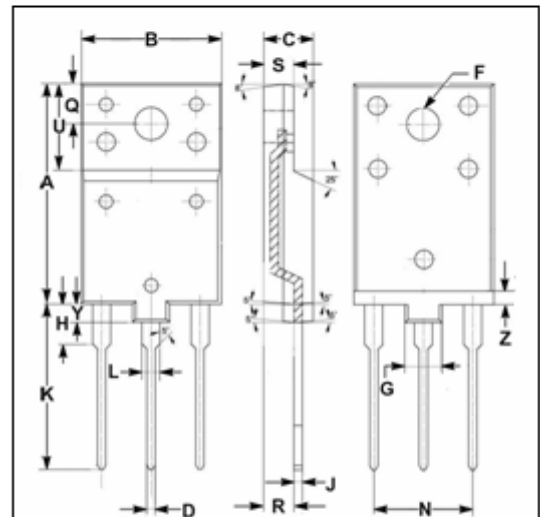
APPLICATIONS

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



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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CES}$	Collector- Emitter Voltage( $V_{BE} = 0$ )	1500	V
$V_{CEO}$	Collector-Emitter Voltage	700	V
$V_{EBO}$	Emitter-Base Voltage	7.5	V
$I_C$	Collector Current- Continuous	5	A
$I_{CM}$	Collector Current-Peak	8	A
$I_B$	Base Current- Continuous	3	A
$I_{BM}$	Base Current-Peak	5	A
$P_C$	Collector Power Dissipation @ $T_C=25^{\circ}C$	45	W
$T_J$	Junction Temperature	150	$^{\circ}C$
$T_{stg}$	Storage Temperature Range	-65~150	$^{\circ}C$



DIM	mm	
	MIN	MAX
A	24.30	24.70
B	15.20	15.80
C	5.20	5.80
D	0.65	0.85
F	3.30	3.90
G	3.90	4.10
H	4.30	4.70
J	0.80	1.00
K	18.30	18.70
L	1.90	2.10
N	10.70	11.10
Q	4.40	4.60
R	3.30	3.70
S	3.20	3.40
U	9.50	9.70
Y	1.90	2.10
Z	1.40	1.60

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	2.8	$^{\circ}C/W$

## isc Silicon NPN Power Transistor

## BU2506DX

## 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	$I_C=100\text{mA}$ ; $I_B=0$ ; $L=25\text{mH}$	700			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E=600\text{mA}$ ; $I_C=0$	7.5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C=3\text{A}$ ; $I_B=0.79\text{A}$			5.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C=3\text{A}$ ; $I_B=0.79\text{A}$			1.1	V
$I_{CES}$	Collector Cutoff Current	$V_{CE}=1500\text{V}$ ; $V_{BE}=0$ $V_{CE}=1500\text{V}$ ; $V_{BE}=0$ ; $T_C=125^{\circ}\text{C}$			1.0 2.0	mA
$I_{EBO}$	Emitter Cutoff Current	$V_{EB}=7.5\text{V}$ ; $I_C=0$		136		mA
$h_{FE-1}$	DC Current Gain	$I_C=0.3\text{A}$ ; $V_{CE}=5\text{V}$		12		
$h_{FE-2}$	DC Current Gain	$I_C=3\text{A}$ ; $V_{CE}=5\text{V}$	3.8		7.5	
$V_{ECF}$	C-E Diode Forward Voltage	$I_F=3\text{A}$			2.0	V
$C_{OB}$	Output Capacitance	$I_E=0$ ; $V_{CB}=10\text{V}$ ; $f_{test}=1\text{MHz}$		47		pF

## Switching times

$t_{stg}$	Storage Time	$I_C=3\text{A}$ , $I_{B(end)}=0.67\text{A}$ ; $C_{FB}=9.4\text{nF}$ $L_C=1.35\text{mH}$ ; $L_B=8\mu\text{H}$ ; $-V_{BB}=4\text{V}$ ; $(-dI_B/dt=0.45\text{A}/\mu\text{s})$			6.0	$\mu\text{s}$
$t_f$	Fall Time				0.5	$\mu\text{s}$