

isc Silicon NPN Power Transistor

BUX86

DESCRIPTION

- Collector-Emitter Sustaining Voltage-
: $V_{CEO(SUS)} = 400V(\text{Min.})$
- High Speed Switching

APPLICATIONS

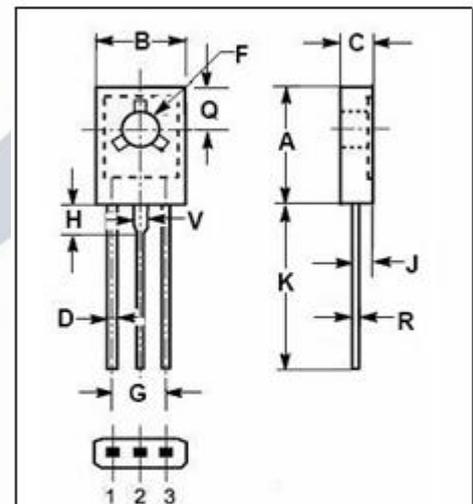
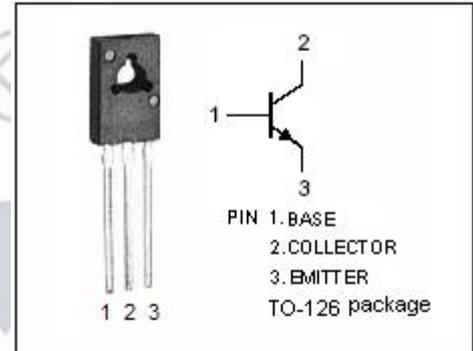
- Designed for use in switching powe supplies of TV sets.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CES}	Collector-Emitter Voltage	800	V
V_{CEO}	Collector-Emitter Voltage	400	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	0.5	A
I_{CM}	Collector Current-Peak	1	A
I_B	Base Current	0.2	A
I_{BM}	Base Current-Peak	0.3	A
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	20	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_{thj-c}	Thermal Resistance, Junction to Case	4.5	$^\circ\text{C/W}$



DIM	mm	
	MIN	MAX
A	10.70	10.90
B	7.70	7.90
C	2.60	2.80
D	0.66	0.86
F	3.10	3.30
G	4.48	4.68
H	2.00	2.20
J	1.35	1.55
K	16.10	16.30
Q	3.70	3.90
R	0.40	0.60
V	1.17	1.37

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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	$I_C= 50\text{mA}; I_B= 0$	400			V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	$I_C= 0.1\text{A}; I_B= 0.01\text{A}$			1.5	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	$I_C= 0.2\text{A}; I_B= 0.02\text{A}$			3.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C= 0.2\text{A}; I_B= 0.02\text{A}$			1.0	V
I_{CBO}	Collector Cutoff Current	$V_{CB}= 800\text{V}; I_E= 0$ $V_{CB}= 800\text{V}; I_E= 0; T_C=150^{\circ}\text{C}$			0.1 1.0	mA
I_{EBO}	Emitter Cutoff Current	$V_{EB}= 5\text{V}; I_C= 0$			1.0	mA
h_{FE-1}	DC Current Gain	$I_C= 0.05\text{A}; V_{CE}= 5\text{V}$	20			
f_T	Current-Gain—Bandwidth Product	$I_C= 0.05\text{A}; V_{CE}= 10\text{V}, f_{test}= 1\text{MHz}$		20		MHz

Switching Times ;Resistive Load

t_{on}	Turn-on Time			0.25	0.5	μs
t_s	Storage Time	$I_C= 0.2\text{A}; I_{B1}= 0.02\text{A}; I_{B2}= -0.04\text{A};$ $V_{CC}= 250\text{V}$		2.0	3.5	μs
t_f	Fall Time			0.4		μs