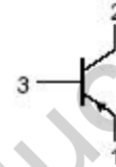
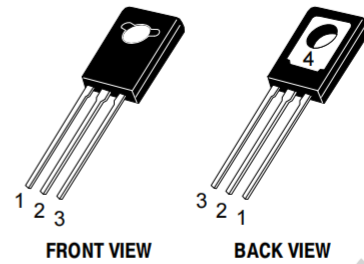


**DESCRIPTION**

- DC Current Gain-  
:  $h_{FE} = 63(\text{Min}) @ I_C = -0.15\text{A}$
- Collector-Emitter Sustaining Voltage -  
:  $V_{CEO(\text{SUS})} = -80\text{V}(\text{Min})$
- Complement to type BD139

**APPLICATIONS**

- Designed for use as audio amplifiers and drivers utilizing complementary or quasi complementary circuits.


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

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CBO}$	Collector-Base Voltage	-100	V
$V_{CEO}$	Collector-Emitter Voltage	-80	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current-Continuous	-1.5	A
$I_B$	Base Current-Continuous	-0.5	A
$P_C$	Collector Power Dissipation @ $T_a = 25^\circ\text{C}$	1.25	W
	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	12.5	
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{\text{stg}}$	Storage Temperature Range	-55~150	$^\circ\text{C}$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{\text{th}j-c}$	Thermal Resistance, Junction to Case	10	$^\circ\text{C}/\text{W}$
$R_{\text{th}j-a}$	Thermal Resistance, Junction to Ambient	100	$^\circ\text{C}/\text{W}$

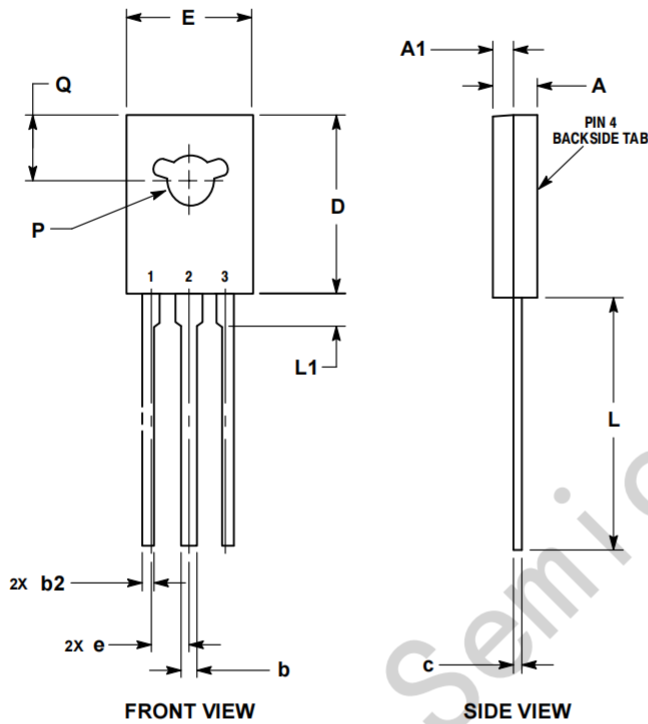
**ELECTRICAL CHARACTERISTICS**

 T<sub>c</sub>=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	I <sub>C</sub> = -30mA; I <sub>B</sub> =0	-80			V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = -0.5A; I <sub>B</sub> = -50mA			-0.5	V
V <sub>BE(on)</sub>	Base-Emitter On Voltage	I <sub>C</sub> = -0.5A; V <sub>CE</sub> = -2V			-1.0	V
I <sub>CB0</sub>	Collector Cutoff Current	V <sub>CB</sub> = -30V; I <sub>E</sub> = 0 V <sub>CB</sub> = -30V; I <sub>E</sub> = 0, T <sub>C</sub> =125°C			-0.1 -10	μ A
I <sub>EBO</sub>	Emitter Cutoff Current	V <sub>EB</sub> = -5V; I <sub>C</sub> =0			-0.1	μ A
h <sub>FE-1</sub>	DC Current Gain	I <sub>C</sub> = -5mA; V <sub>CE</sub> = -2V	40			
h <sub>FE-2</sub>	DC Current Gain	I <sub>C</sub> = -0.5A; V <sub>CE</sub> = -2V	25			
h <sub>FE-3</sub>	DC Current Gain	I <sub>C</sub> = -0.15A; V <sub>CE</sub> = -2V	63		250	

## Package Information

TO-126



- NOTES:  
 1. DIMENSIONING AND TOLERANCING PER ASME Y14.5M, 1994.  
 2. CONTROLLING DIMENSION: MILLIMETERS.  
 3. NUMBER AND SHAPE OF LUGS OPTIONAL.

MILLIMETERS		
DIM	MIN	MAX
A	2.40	3.00
A1	1.00	1.50
b	0.60	0.90
b2	0.51	0.88
c	0.39	0.63
D	10.60	11.10
E	7.40	7.80
e	2.04	2.54
L	14.50	16.63
L1	1.27	2.54
P	2.90	3.30
Q	3.80	4.20

STYLE 1:  
 PIN 1. EMITTER  
 2., 4. COLLECTOR  
 3. BASE

