

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

www.centrasemi.com

BFX34

NPN SILICON TRANSISTOR

JEDEC TO-39 CASE

DESCRIPTION: The CENTRAL SEMICONDUCTOR BFX34 is a silicon NPN transistor designed for switching and general purpose applications where a high collector current (5.0 AMPS) is required.

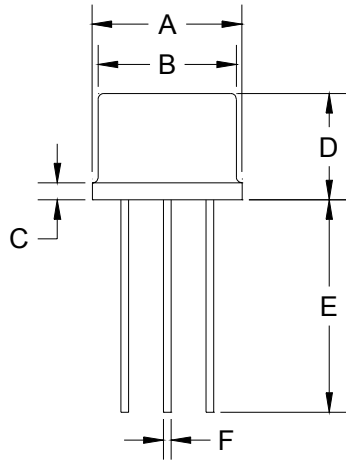
MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

	<u>SYMBOL</u>		<u>UNITS</u>
Collector-Base Voltage	V_{CB0}	120	V
Collector-Emitter Voltage	V_{CEO}	60	V
Emitter-Base Voltage	V_{EBO}	6.0	V
Collector Current	I_C	5.0	A
Power Dissipation	P_D	1.0	W
Power Dissipation ($T_C=25^\circ\text{C}$)	P_D	5.0	W
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200	$^\circ\text{C}$
Thermal Resistance	θ_{JA}	175	$^\circ\text{C/W}$
Thermal Resistance	θ_{JC}	35	$^\circ\text{C/W}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

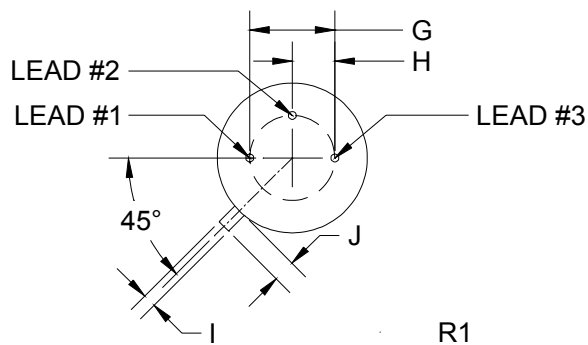
<u>SYMBOL</u>	<u>TEST CONDITIONS</u>	<u>MIN</u>	<u>MAX</u>	<u>UNITS</u>
I_{CES}	$V_{CE}=60\text{V}$		10	μA
I_{EBO}	$V_{EB}=4.0\text{V}$		10	μA
BV_{CB0}	$I_C=5.0\text{mA}$	120		V
BV_{CEO}	$I_C=100\text{mA}$	60		V
BV_{EBO}	$I_E=1.0\text{mA}$	6.0		V
$V_{CE(SAT)}$	$I_C=5.0\text{A}, I_B=0.5\text{A}$		1.0	V
$V_{BE(SAT)}$	$I_C=5.0\text{A}, I_B=0.5\text{A}$		1.6	V
h_{FE}	$V_{CE}=2.0\text{V}, I_C=2.0\text{A}$	40	150	
f_T	$V_{CE}=5.0\text{V}, I_C=0.5\text{A}, f=20\text{MHz}$	70		MHz
C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		100	pF
C_{ib}	$V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$		500	pF
t_{on}	$V_{CC}=20\text{V}, I_C=5.0\text{A}, I_{B1}=I_{B2}=0.5\text{A}$		0.6	μs
t_{off}	$V_{CC}=20\text{V}, I_C=5.0\text{A}, I_{B1}=I_{B2}=0.5\text{A}$		1.2	μs

(SEE REVERSE SIDE)

TO-39 PACKAGE - MECHANICAL OUTLINE

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A (DIA)	0.335	0.370	8.51	9.40
B (DIA)	0.315	0.335	8.00	8.51
C	-	0.040	-	1.02
D	0.240	0.260	6.10	6.60
E	0.500	-	12.70	-
F (DIA)	0.016	0.021	0.41	0.53
G (DIA)	0.200		5.08	
H	0.100		2.54	
I	0.028	0.034	0.71	0.86
J	0.029	0.045	0.74	1.14

TO-39 (REV: R1)

Lead Code

- 1) Emitter
- 2) Base
- 3) Collector

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