

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

BFY90

NPN SILICON RF TRANSISTOR

JEDEC TO-72 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR BFY90 is a Silicon NPN Epitaxial Planar Transistors mounted in a hermetically sealed package designed for VHF/UHF amplifier, oscillator and converter applications.

## MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise noted)

	SYMBOL		UNITS
Collector-Base Voltage	V <sub>CB0</sub>	30	V
Collector-Emitter Voltage (R <sub>BE</sub> =50Ω)	V <sub>CER</sub>	30	V
Collector-Emitter Voltage	V <sub>CEO</sub>	15	V
Emitter-Base Voltage	V <sub>EBO</sub>	2.5	V
Collector Current	I <sub>C</sub>	50	mA
Power Dissipation	P <sub>D</sub>	200	mW
Power Dissipation (T <sub>C</sub> =25°C)	P <sub>D</sub>	300	mW
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 to +200	°C
Thermal Resistance	θ <sub>JA</sub>	875	°C/W
Thermal Resistance	θ <sub>JC</sub>	583	°C/W

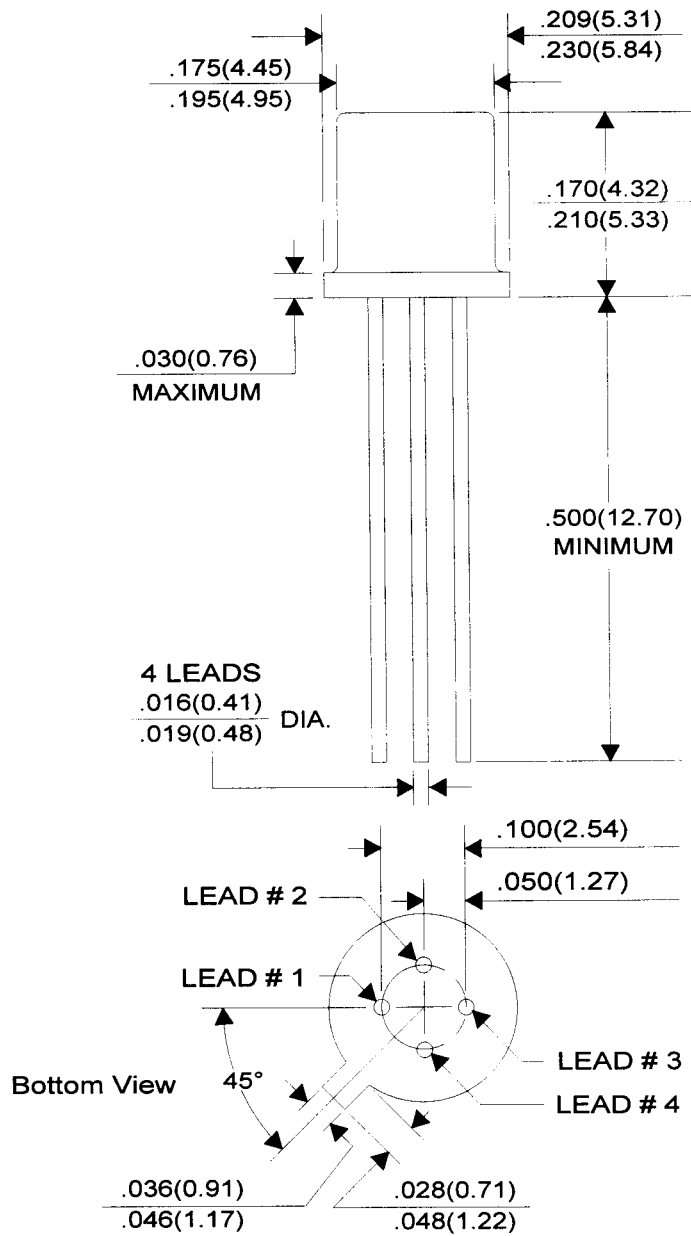
## ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
I <sub>CB0</sub>	V <sub>CB</sub> =15V			10	nA
BV <sub>CB0</sub>	I <sub>C</sub> =10μA	30			V
BV <sub>CER</sub>	I <sub>C</sub> =1.0mA, R <sub>BE</sub> =50Ω	30			V
BV <sub>CEO</sub>	I <sub>C</sub> =1.0mA	15			V
BV <sub>EBO</sub>	I <sub>E</sub> =10μA	2.5			V
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =2.0mA	25		150	
h <sub>FE</sub>	V <sub>CE</sub> =1.0V, I <sub>C</sub> =25mA	20		125	
f <sub>T</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =2.0mA, f=500MHz	1000			MHz
f <sub>T</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =25mA, f=500MHz	1300			MHz
C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1.0MHz			1.5	pF
C <sub>re</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =2.0mA, f=1.0MHz			0.8	pF
G <sub>pe</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =14mA, f=200MHz	21			dB
NF	V <sub>CE</sub> =5.0V, I <sub>C</sub> =2.0mA, f=100kHz			4.0	dB
NF	V <sub>CE</sub> =5.0V, I <sub>C</sub> =2.0mA, f=200MHz			3.5	dB
NF	V <sub>CE</sub> =5.0V, I <sub>C</sub> =2.0mA, f=500MHz, R <sub>G</sub> =50Ω			5.0	dB
P <sub>o</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =14mA, f=205MHz	10			mW

(See Reverse Side)

R2

# JEDEC TO-72 CASE - MECHANICAL OUTLINE



All Dimensions in Inches (mm).

Lead Code:

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

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