

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

2N3821
2N3822
2N3824

N-CHANNEL JUNCTION
FIELD EFFECT TRANSISTOR

JEDEC TO-72 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N3821, 2N3822, 2N3824 types are silicon N-Channel Junction Field Effect Transistors designed for low frequency, low noise amplifier applications.

MAXIMUM RATINGS (T_A = 25°C)

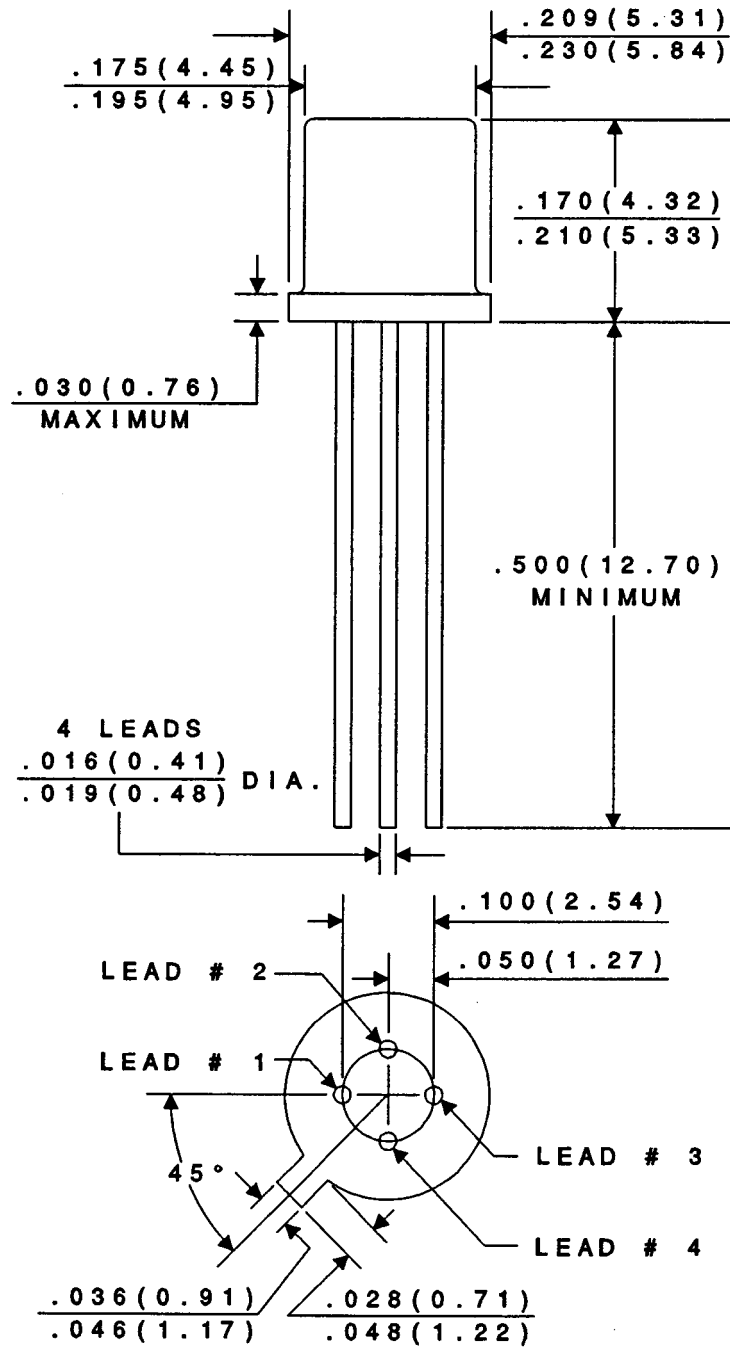
	SYMBOL		UNITS
Drain-Source Voltage	V _{DS}	50	V
Drain-Gate Voltage	V _{DG}	50	V
Gate-Source Voltage	V _{GS}	50	V
Drain Current	I _D	10	mA
Power Dissipation	P _D	300	mW
Junction Temperature	T _J	175	°C
Storage Temperature	T _{stg}	-65 to +200	°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N3821		2N3822		2N3824		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
I _{GSS}	V _{GS} = 30V		0.1		0.1		0.1	nA
I _{GSS}	V _{GS} = 30V, T _A = 150°C		100		100		100	nA
I _{DSS}	V _{DS} = 15V	0.5	2.5	2.0	10			mA
BV _{GSS}	I _G = 1.0μA	50		50		50		V
V _{GS(OFF)}	V _{DS} = 15V, I _D = 0.5nA		4.0		6.0			V
V _{GS}	V _{DS} = 15V, I _D = 50μA	0.5	2.0					V
V _{GS}	V _{DS} = 15V, I _D = 200μA			1.0	4.0			V
I _{D(OFF)}	V _{DS} = 15V, V _{GS} = 8.0V					0.1		nA
I _{D(OFF)}	V _{DS} = 15V, V _{GS} = 8.0V, T _A = 150°C					100		nA
Y _{fs}	V _{DS} = 15V, V _{GS} = 0, f = 1kHz	1500	4500	3000	6500			μmho
Y _{fs}	V _{DS} = 15V, V _{GS} = 0, f = 100MHz	1500		3000				μmho
Y _{os}	V _{DS} = 15V, V _{GS} = 0, f = 1.0kHz		10		20			μmho
C _{iss}	V _{DS} = 15V, V _{GS} = 0, f = 1MHz		6.0		6.0	6.0		pF
C _{rss}	V _{DS} = 15V, V _{GS} = 0, f = 1MHz		3.0		3.0			pF
C _{rss}	V _{DS} = 8.0V, V _{DS} = 0, f = 1MHz					3.0		pF
r _{DS(ON)}	V _{GS} = 0, I _D = 0, f = 1kHz					250		Ω
NF	V _{DS} = 15V, V _{GS} = 0, R _S = 1.0MΩ, f = 10Hz, Noise BW = 5.0Hz		5.0		5.0			dB
e _n	V _{DS} = 15V, V _{GS} = 0, f = 10Hz, Noise BW = 5.0Hz		200		200			nV/√Hz

(Continued on reverse side)

JEDEC TO-72 - MECHANICAL DIMENSIONS



LEAD CODE:

- 1) SOURCE
- 2) DRAIN
- 3) GATE
- 4) CASE LEAD

NOTE: ALL DIMENSIONS IN INCHES (mm).