

CentralTM Semiconductor Corp.

145 Adams Avenue, Hauppauge, NY 11788 USA
Tel: (631) 435-1110 • Fax: (631) 435-1824

Manufacturers of World Class Discrete Semiconductors

2N4416
2N4416A

N-CHANNEL JUNCTION
FIELD EFFECT TRANSISTOR

JEDEC TO-72 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4416, 2N4416A are silicon N-Channel Junction Field Effect Transistors designed for VHF amplifier and mixer applications.

MAXIMUM RATINGS (T_A=25°C unless otherwise noted.)

	SYMBOL	2N4416	2N4416A	Unit
Gate-Drain Voltage	V _{GD}	30	35	V
Gate-Source Voltage	V _{GS}	30	35	V
Drain-Source Voltage	V _{DS}	30	35	V
Gate Current	I _G	10	10	mA
Power Dissipation	P _D	300	300	mW
Operating & Storage Junction Temperature	T _J , T _{stg}	-65 TO +200		°C

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

SYMBOL	TEST CONDITIONS	2N4416		2N4416A		UNIT
		MIN	MAX	MIN	MAX	
I _{GSS}	V _{GS} =20V, V _{DS} =0V		0.1		0.1	A
I _{GSS}	V _{GS} =20V, V _{DS} =0V, T _A =150°C		0.1		0.1	uA
I _{DSS}	V _{DS} =15V, V _{GS} =0V	5.0	15	5	15	mA
BV _{GSS}	V _{DS} =0V, I _G =1uA	30		35		V
V _{GS(off)}	V _{DS} =15V, I _D =1nA	--	6.0	2.5	6.0	V
g _{fs}	V _{DS} =15V, V _{GS} =0V, f=1kHz	4,500	7,500	4,500	7,500	umho
g _{os}	V _{DS} =15V, V _{GS} =0V, f=1kHz		50		50	umho
C _{rss}	V _{DS} =15V, V _{GS} =0V, f=1MHz		0.8		0.8	pF
C _{iss}	V _{DS} =15V, V _{GS} =0V, f=1MHz		4.0		4.0	pF
C _{oss}	V _{DS} =15V, V _{GS} =0V, f=1MHz		2.0		2.0	pF

HIGH FREQUENCY CHARACTERISTICS

		100 MHz		400 MHz		UNIT
		MIN	MAX	MIN	MAX	
g _{iss}	V _{DS} =15V, V _{GS} =0V		100		1,000	umho
b _{iss}	V _{DS} =15V, V _{GS} =0V		2,500		10,000	umho
g _{oss}	V _{DS} =15V, V _{GS} =0V		75		100	umho
b _{oss}	V _{DS} =15V, V _{GS} =0V		1,000		4,000	umho
g _{fs}	V _{DS} =15V, V _{GS} =0V			4,000		umho
G _{ps}	V _{DS} =15V, I _D =5mA	18		10		dB
NF	V _{DS} =15V, I _D =5mA, R _G =1,000 OHMS		2		4	dB