Data Sheet

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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)

		2N4416		2N4416A		
SYMBOL	TEST CONDITIONS	MIN	MAX	MIN	MAX	UNIT
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
gfs	V_{DS}=15V, V_{GS}=0V, f=1kHz	4,500	7,500	4,500	7,500	umho
gos	V_{DS}=15V, V_{GS}=0V, f=1kHz		50		50	umho
Crss	V_{DS}=15V, V_{GS}=0V, f=1MHz		0.8		0.8	pF
Ciss	VDS=15V, VGS=0V, f=1MHz		4.0		4.0	pF
Coss	VDS=15V, VGS=0V, f=1MHz		2.0		2.0	pF

HIGH FREQUENCY CHARACTERISTICS

		100 MHz		400 MHz		
		MIN	MAX	MIN	MAX	UNIT
g_{iss}	VDS=15V, VGS=0V		100		1,000	umho
b_{iss}	VDS=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