

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

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Manufacturers of World Class Discrete Semiconductors

2N5245  
2N5246  
2N5247

N-CHANNEL JUNCTION  
FIELD EFFECT TRANSISTOR

JEDEC TO-92 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5245 Series types are Silicon N-Channel Junction Field Effect Transistors designed for VHF amplifier and mixer applications.

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

	SYMBOL		UNIT
Gate-Drain Voltage	V <sub>GD</sub>	30	V
Gate-Source Voltage	V <sub>GS</sub>	30	V
Gate Current	I <sub>G</sub>	50	mA
Power Dissipation	P <sub>D</sub>	360	mW
Operating and Storage Junction Temperature	T <sub>J</sub> , T <sub>stg</sub>	-65 TO +150	°C

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

SYMBOL	TEST CONDITIONS	2N5245		2N5246		2N5247		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
I <sub>GSS</sub>	V <sub>GS</sub> =20V		1.0		1.0		1.0	nA
I <sub>GSS</sub>	V <sub>GS</sub> =20V, T <sub>A</sub> =100°C		0.5		0.5		0.5	μA
I <sub>DSS</sub>	V <sub>DS</sub> =15V	5.0	15	1.5	7.0	8.0	24	mA
BV <sub>GSS</sub>	I <sub>G</sub> =1.0μA	30		30		30		V
V <sub>GS(OFF)</sub>	V <sub>DS</sub> =15V	1.0	6.0	0.5	4.0	1.5	8.0	V
Y <sub>fs</sub>	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=1.0kHz	4.5	7.5	3.0	6.0	4.5	8.0	mmho
Y <sub>os</sub>	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=1.0kHz		0.05		0.05		0.07	mmho
C <sub>iss</sub>	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=1.0MHz		4.5		4.5		4.5	pF
C <sub>rss</sub>	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=1.0MHz		1.0		1.0		1.0	pF
Re(y <sub>is</sub> )	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=100MHz		0.1		0.1		0.1	mmho
Im(y <sub>is</sub> )	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=100MHz		3.0		3.0		3.0	mmho
Re(y <sub>os</sub> )	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=100MHz		0.075		0.075		0.1	mmho
Im(y <sub>os</sub> )	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=100MHz		1.0		1.0		1.0	mmho
Re(y <sub>is</sub> )	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=400MHz		1.0		1.0		1.0	mmho
Im(y <sub>is</sub> )	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=400MHz		12		12		12	mmho
Re(y <sub>fs</sub> )	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=400MHz	4.0		2.5		4.0		mmho
Re(y <sub>os</sub> )	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=400MHz		0.1		0.1		0.15	mmho
Im(y <sub>os</sub> )	V <sub>DS</sub> =15V, V <sub>GS</sub> =0, f=400MHz		4.0		4.0		4.0	mmho
NF	V <sub>DS</sub> =15V, I <sub>D</sub> =5.0mA, R <sub>G</sub> =1.0kΩ, f=100MHz		2.0		-		-	dB
NF	V <sub>DS</sub> =15V, I <sub>D</sub> =5.0mA, R <sub>G</sub> =1.0KΩ, f=400MHz		4.0		-		-	dB
G <sub>ps</sub>	V <sub>DS</sub> =15V, I <sub>D</sub> =5.0mA, R <sub>G</sub> =1.0kΩ, f=100MHz	18		-		-		dB
G <sub>ps</sub>	V <sub>DS</sub> =15V, I <sub>D</sub> =5.0mA, R <sub>G</sub> =1.0KΩ, f=400MHz	10		-		-		dB