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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_A=25°C)

	SYMBOL		UNIT
Gate-Drain Voltage	V _{GD}	30	V
Gate-Source Voltage	V _{GS}	30	V
Gate Current	I _G	50	mA
Power Dissipation	P _D	360	mW
Operating and Storage			
Junction Temperature	T _J , T _{stg}	-65 TO +150	°C

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

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