Data Sheet

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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 MIN	2N5245 MAX	2N5246 MIN	2N5246 MAX	2N5247 MIN	2N5247 MAX	UNIT
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
$R_{e(yis)}$	V_{DS}=15V, V_{GS}=0, f=100MHz		0.1		0.1		0.1	mmho
$I_{m(yis)}$	V_{DS}=15V, V_{GS}=0, f=100MHz		3.0		3.0		3.0	mmho
$R_{e(yos)}$	V_{DS}=15V, V_{GS}=0, f=100MHz		0.075		0.075		0.1	mmho
$I_{m(yos)}$	V_{DS}=15V, V_{GS}=0, f=100MHz		1.0		1.0		1.0	mmho
$R_{e(yis)}$	V_{DS}=15V, V_{GS}=0, f=400MHz		1.0		1.0		1.0	mmho
$I_{m(yis)}$	V_{DS}=15V, V_{GS}=0, f=400MHz		12		12		12	mmho
$R_{e(yfs)}$	V_{DS}=15V, V_{GS}=0, f=400MHz	4.0		2.5		4.0		mmho
$R_{e(yos)}$	V_{DS}=15V, V_{GS}=0, f=400MHz		0.1		0.1		0.15	mmho
$I_{m(yos)}$	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