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Manufacturers of World Class Discrete Semiconductors

2N5484 THRU 2N5486

N CHANNEL JUNCTION
FIELD EFFECT TRANSISTOR

JEDEC TO-92 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N5484 Series types are Silicon N Channel J-FETs designed for RF amplifier and mixer applications. These devices will operate well in the VHF/UHF frequency range.

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)	SYMBOL	UNIT
Gate-Drain Voltage	V_{GD}	25 V
Gate-Source Voltage	V_{GS}	25 V
Drain Current	I_D	30 mA
Gate Current	I_G	10 mA
Power Dissipation	P_D	310 mW
Operating and Storage Junction Temperature	T_J, T_{STG}	-65 TO +150 $^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise noted)

SYMBOL	TEST CONDITIONS	2N5484		2N5485		2N5486		UNIT
		MIN	MAX	MIN	MAX	MIN	MAX	
I_{GSS}	$V_{GS}=20\text{V}$		1.0		1.0		1.0	nA
I_{GSS}	$V_{GS}=20\text{V}, T_A=100^\circ\text{C}$		0.2		0.2		0.2	μA
I_{DSS}	$V_{DS}=15\text{V}$	1.0	5.0	4.0	10	8.0	20	mA
BV_{GSS}	$I_G=1.0\mu\text{A}$	25		25		25		V
$V_{GS(OFF)}$	$V_{DS}=15\text{V}, I_D=10\text{nA}$	0.3	3.0	0.5	4.0	2.0	6.0	V
Y_{fs}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{kHz}$	3000	6000	3500	7000	4000	8000	μmhos
Y_{os}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{kHz}$		50		60		75	μmhos
C_{iss}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{MHz}$		5.0		5.0		5.0	pF
C_{oss}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{MHz}$		2.0		2.0		2.0	pF
C_{rss}	$V_{DS}=15\text{V}, V_{GS}=0, f=1.0\text{MHz}$		1.0		1.0		1.0	pF
$R_e(y_{is})$	$V_{DS}=15\text{V}, V_{GS}=0, f=100\text{MHz}$		100		-		-	μmhos
$R_e(y_{is})$	$V_{DS}=15\text{V}, V_{GS}=0, f=400\text{MHz}$		-		1000		1000	μmhos
$R_e(y_{os})$	$V_{DS}=15\text{V}, V_{GS}=0, f=100\text{MHz}$		75		-		-	μmhos
$R_e(y_{os})$	$V_{DS}=15\text{V}, V_{GS}=0, f=400\text{MHz}$		-		100		100	μmhos
$R_e(y_{fs})$	$V_{DS}=15\text{V}, V_{GS}=0, f=100\text{MHz}$	2500		-		-		μmhos
$R_e(y_{fs})$	$V_{DS}=15\text{V}, V_{GS}=0, f=400\text{MHz}$	-		3000		3500		μmhos
NF	$V_{DS}=15\text{V}, V_{GS}=0, R_G=1.0\text{Meg}\Omega, f=1.0\text{kHz}$		2.5		2.5		2.5	dB
NF	$V_{DS}=15\text{V}, I_D=1.0\text{mA}, R_G=1.0\text{k}\Omega, f=100\text{MHz}$		3.0		-		-	dB
NF	$V_{DS}=15\text{V}, I_D=1.0\text{mA}, R_G=1.0\text{k}\Omega, f=200\text{MHz}$	4.0TYP		-	-	-	-	dB
NF	$V_{DS}=15\text{V}, I_D=4.0\text{mA}, R_G=1.0\text{k}\Omega, f=100\text{MHz}$		-		2.0		2.0	dB
NF	$V_{DS}=15\text{V}, I_D=4.0\text{mA}, R_G=1.0\text{k}\Omega, f=400\text{MHz}$		-		4.0		4.0	dB
G_{ps}	$V_{DS}=15\text{V}, I_D=1.0\text{mA}, f=100\text{MHz}$	16	25	-	-	-	-	dB
G_{ps}	$V_{DS}=15\text{V}, I_D=1.0\text{mA}, f=200\text{MHz}$	14TYP		-		-		dB
G_{ps}	$V_{DS}=15\text{V}, I_D=4.0\text{mA}, f=100\text{MHz}$	-	-	18	30	18	30	dB
G_{ps}	$V_{DS}=15\text{V}, I_D=4.0\text{mA}, f=400\text{MHz}$	-	-	10	20	10	20	dB