

Ordering number:EN661E

N-Channel Junction Silicon FET



2SK212

FM Tuner Applications

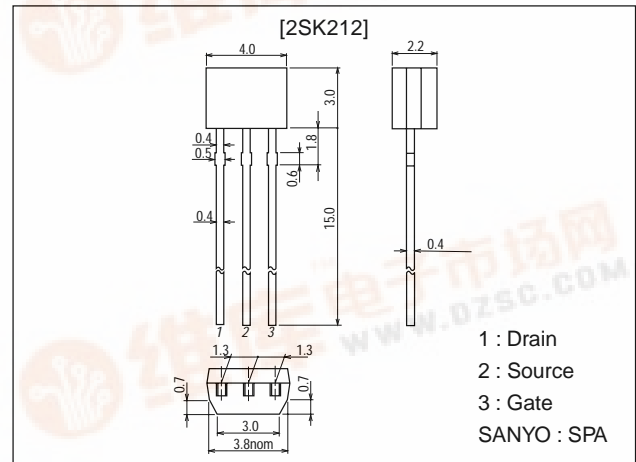
Features

- Ideal for FM tuners in low-voltage radios, car radios, etc.
- Small-sized package permitting 2SK212-applied sets to be made small and slim.
- Small Crss (Crss=0.04pF typ).
- High $|y_{fs}|$ ($|y_{fs}|=6.0\text{mS typ}$).

Package Dimensions

unit:mm

2040A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Gate-to-Drain Voltage	V _{GDO}		-20	V
Gate Current	I _G		10	mA
Drain Current	I _D		20	mA
Allowable Power Dissipation	P _D		200	mW
Junction Temperature	T _J		125	°C
Storage Temperature	T _{stg}		-55 to +125	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	V _{(BR)GDO}	I _G =-10μA	-20			V
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =-0.5V, V _{DS} =0			-10	nA
Zero-Gate Voltage Drain Current	I _{DSS} *	V _{DS} =5V, V _{GS} =0	0.6*		12.0*	mA
Cutoff Voltage	V _{GS(off)}	V _{DS} =5V, I _D =10μA			-2.5	V
Forward Transfer Admittance	y _{fs} 1	V _{DS} =5V, V _{GS} =0, f=1kHz	2.0	6.0		mS
	y _{fs} 2	V _{DS} =5V, V _{GS} =0, f=100MHz	2.0	6.0		mS
Input Capacitance	C _{iss}	V _{DS} =5V, V _{GS} =0, f=1MHz		4.0		pF
Output Capacitance	C _{oss}	V _{DS} =5V, V _{GS} =0, f=1MHz		4.0		pF
Reverse Transfer Capacitance	Crss	V _{DS} =5V, V _{GS} =0, f=1MHz		0.04	0.15	pF

* : The 2SK212 is classified by I_{DSS} as follows (unit : mA).

0.6	C	1.5	1.2	D	3.0	2.5	E	6.0	5.0	F	12.0
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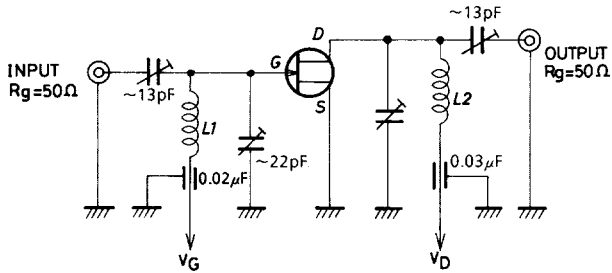


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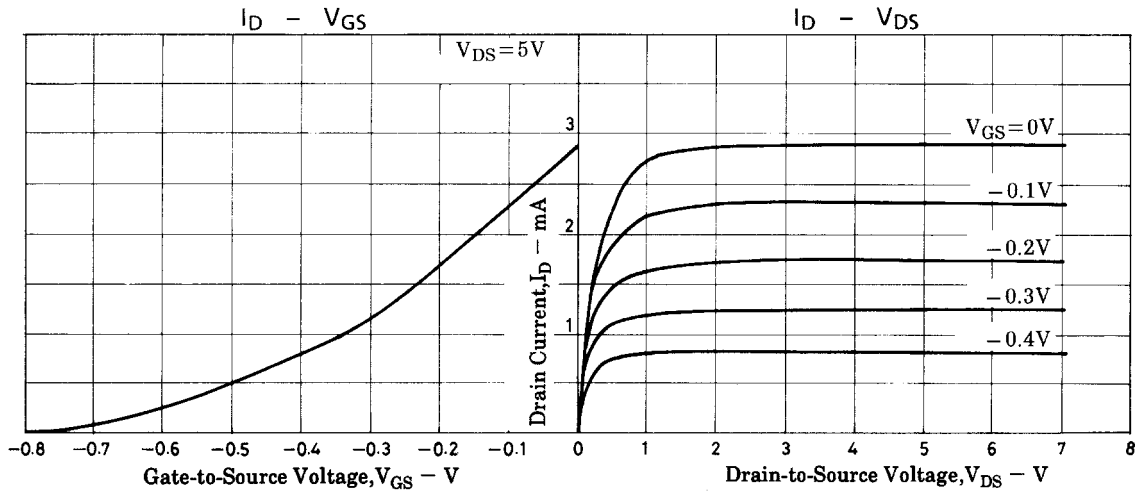
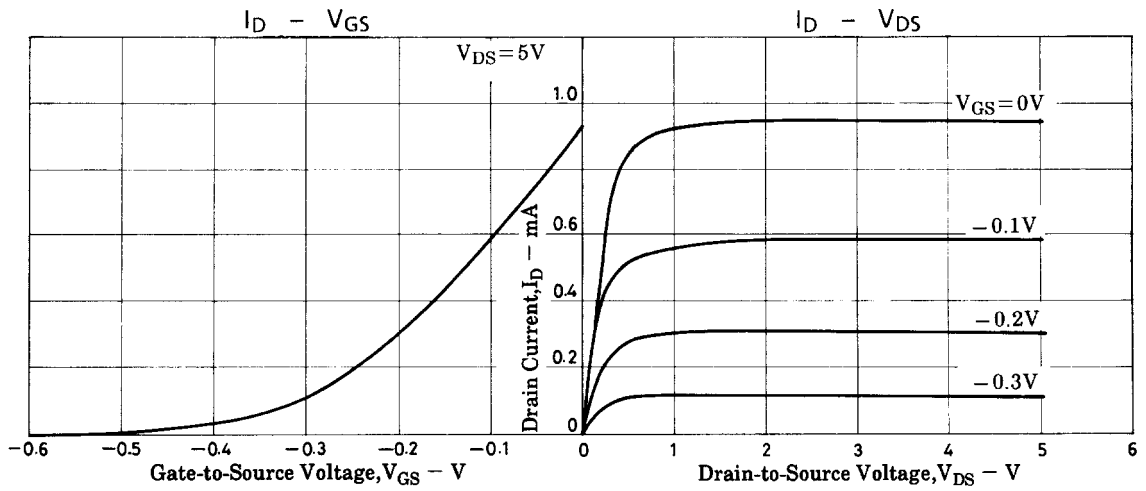
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Parameter	Symbol	Conditions	Ratings		Unit
Power Gain	PG	$V_{DS}=5V, V_{GS}=0, f=100MHz,$ See specified Test Circuit	21		dB
Noise Figure	NF	See specified Test Circuit	3.5	6.0	dB

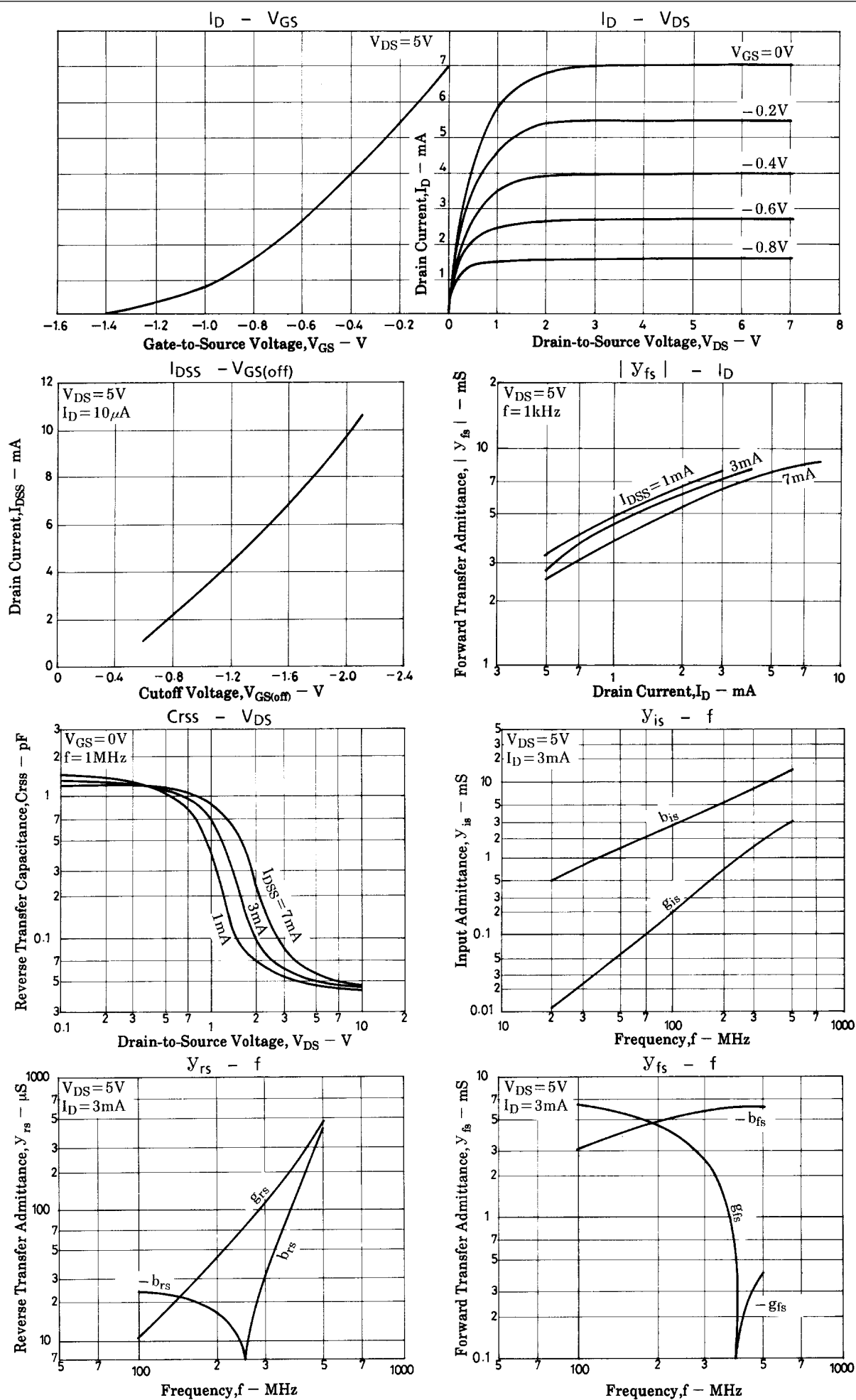
PG, NF Specified Test Circuit



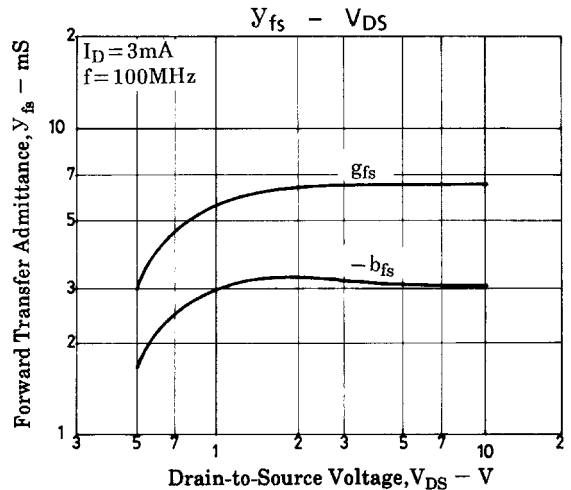
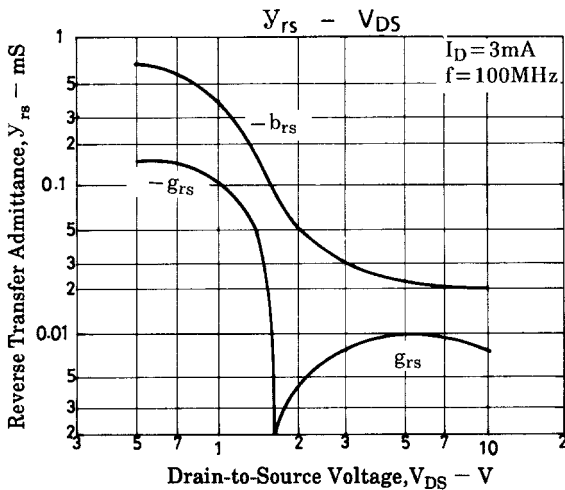
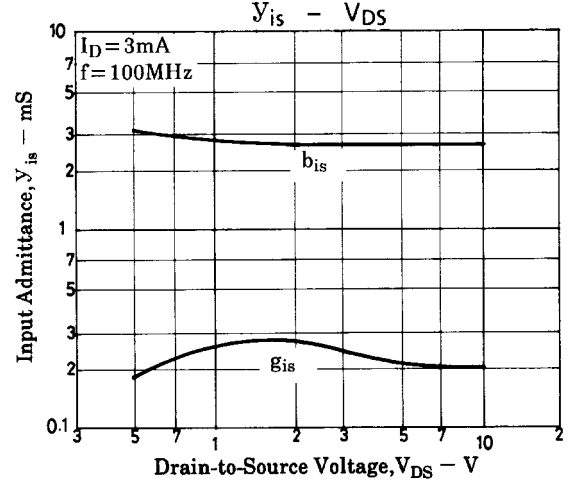
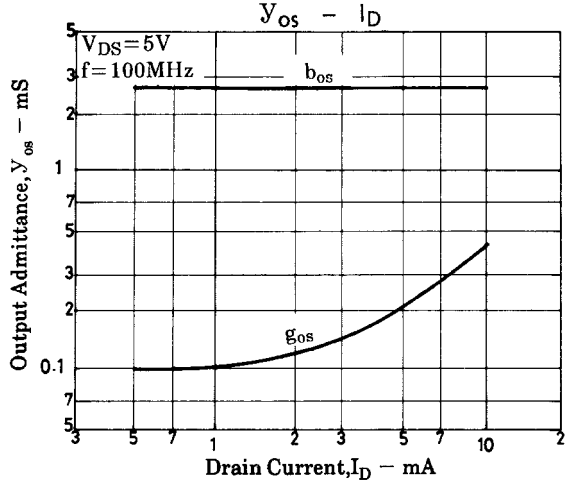
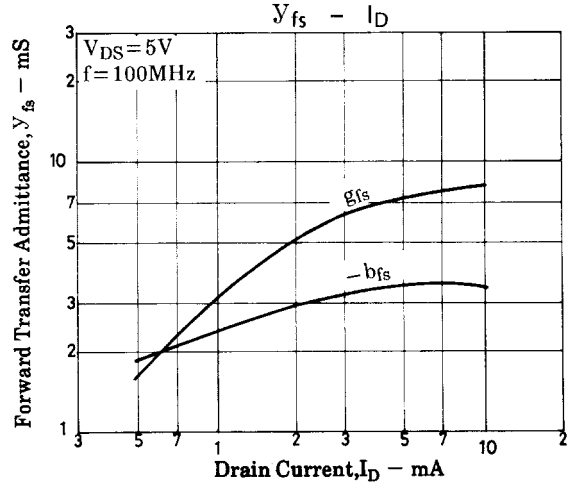
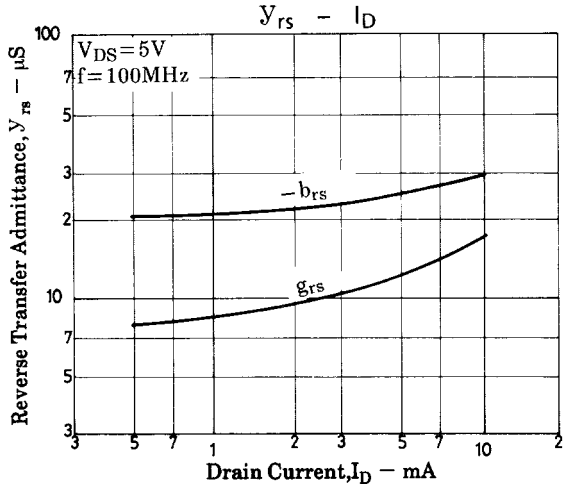
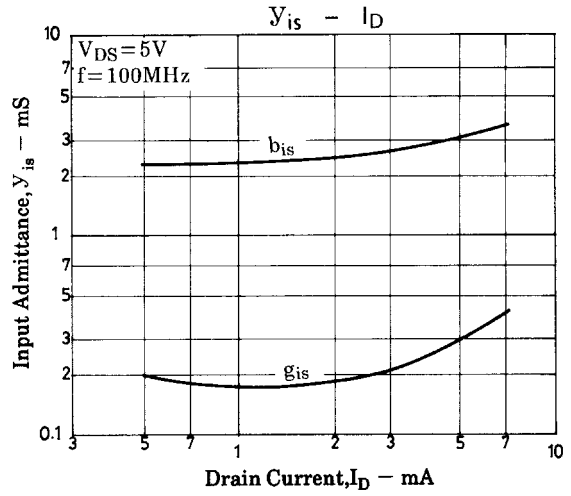
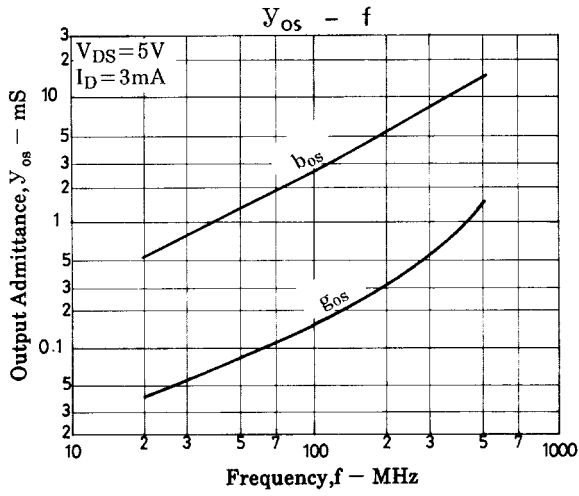
L1 : 1mm ϕ tin-plated wire, air core 10mm ϕ 4.5T
L2 : 1mm ϕ tin-plated wire, air core 10mm ϕ 3.5T



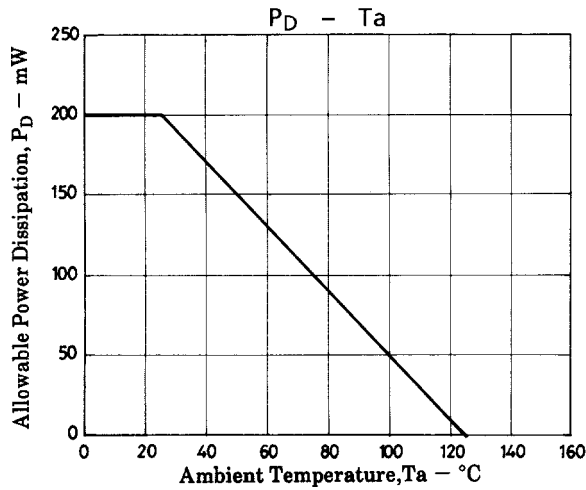
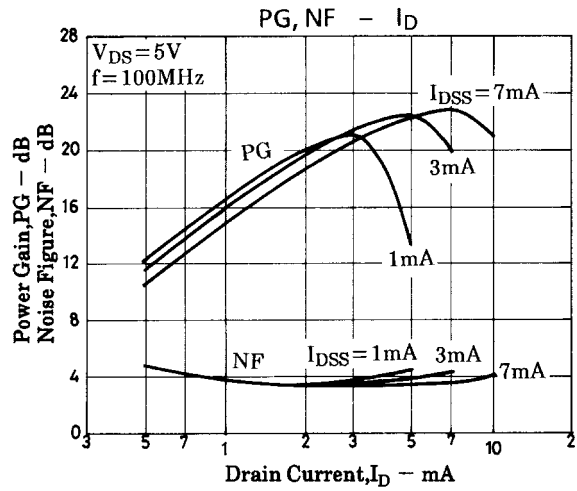
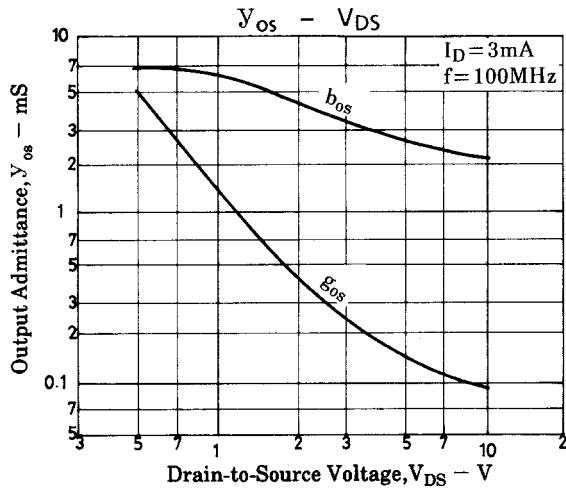
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