

**2SK242**

## Low-Frequency General-Purpose Amplifier Applications

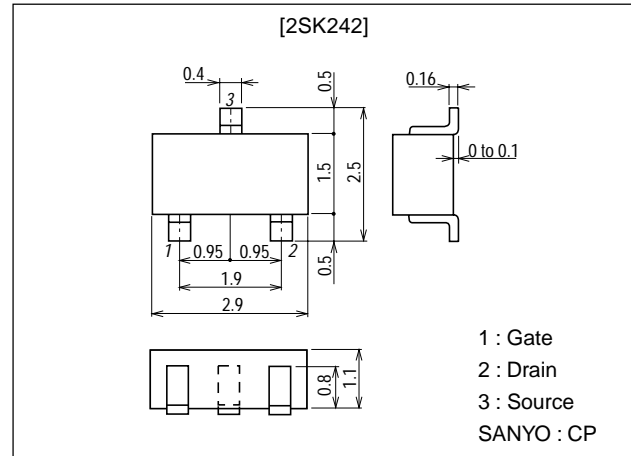
### Features

- Ultrasmall-sized package permitting 2SK242-applied sets to be made small and slim.
- Small Crss (Crss=0.04pF typ).

### Package Dimensions

unit:mm

2024B



### 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	$P_D$		150	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	$V_{(BR)GDO}$	$I_G = -10\mu A$	-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	$V_{GS(off)}$	$V_{DS} = 5V, I_D = 10\mu A$			-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	$C_{rss}$	$V_{DS} = 5V, V_{GS} = 0, f = 1MHz$		0.04	0.15	pF

\* : The 2SK242 is classified by  $I_{DSS}$  as follows : (unit : mA).

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0.6	2	1.5	1.2	3	3.0	2.5	4	6.0	5.0	5	12.0
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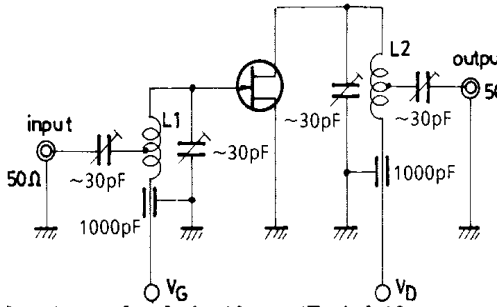
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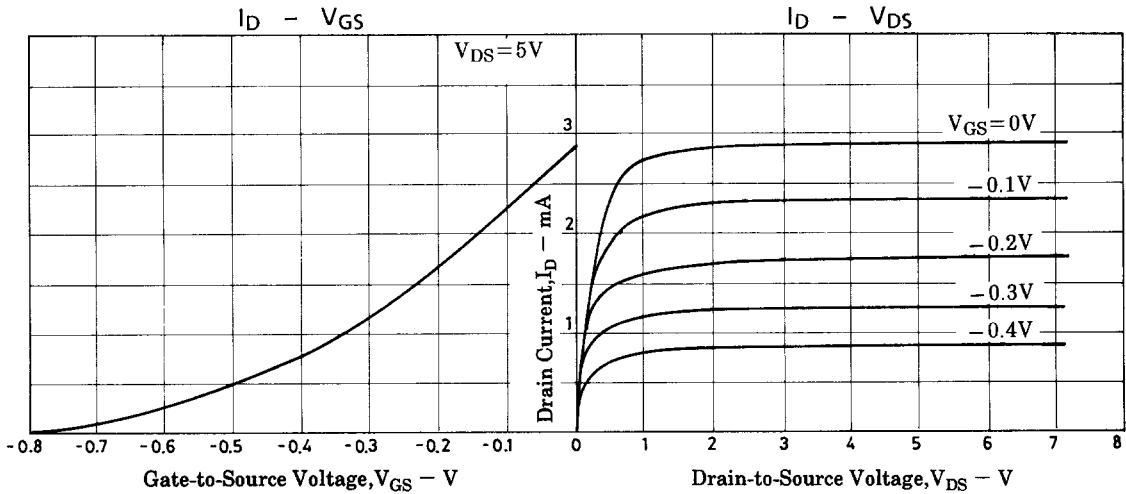
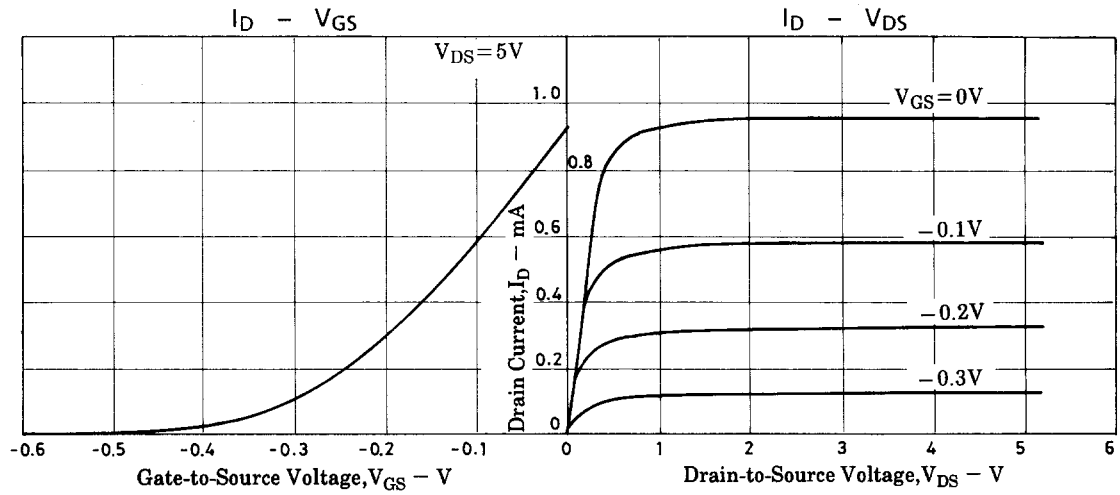
Parameter	Symbol	Conditions	Ratings		Unit
Power Gain	PG	$V_{DS}=5V, V_{GS}=0, f=100MHz,$ See specified Test Circuit	24		dB
Noise Figure	NF	See specified Test Circuit	3.5	6.0	dB

## PG, NF Specified Test Circuit

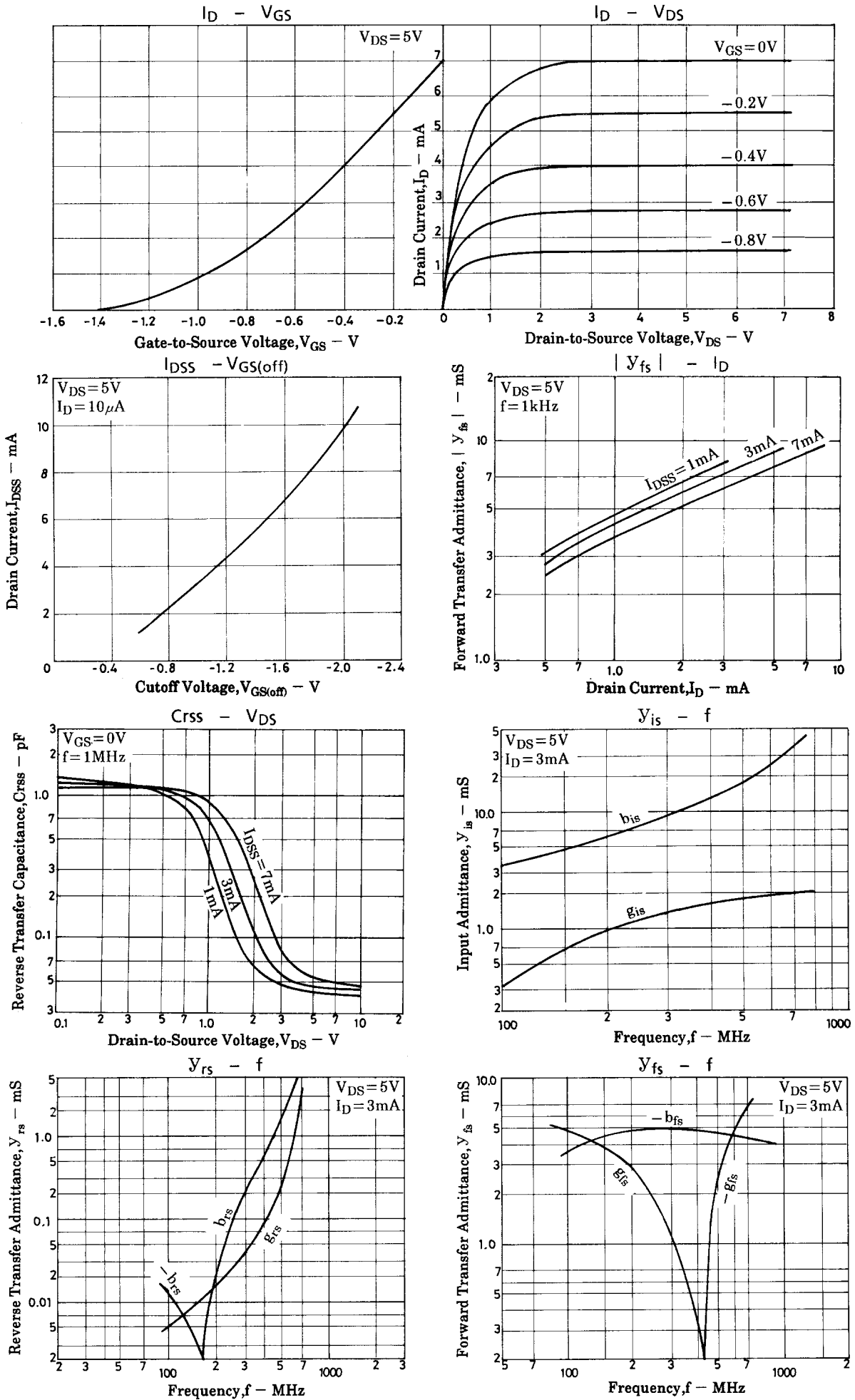


$L_1$ : 1mm $\phi$  plated wire 10mm $\phi$  4T, pitch 18mm,  
tap : 1T from gate side

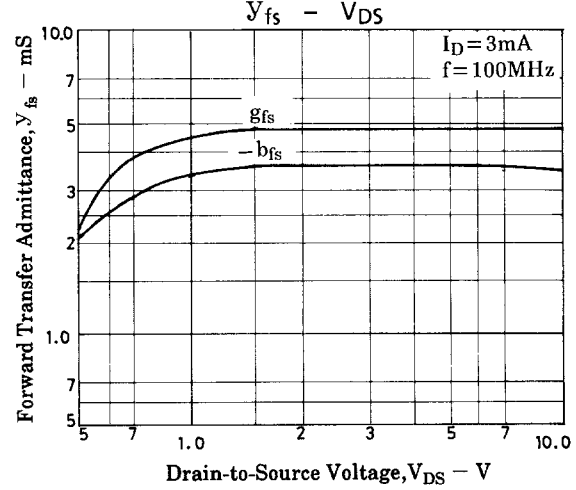
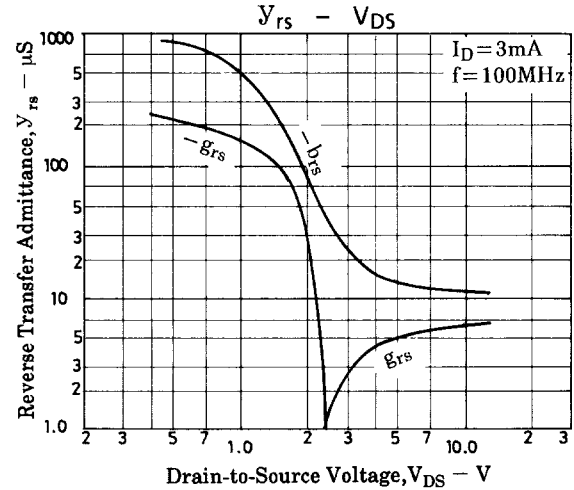
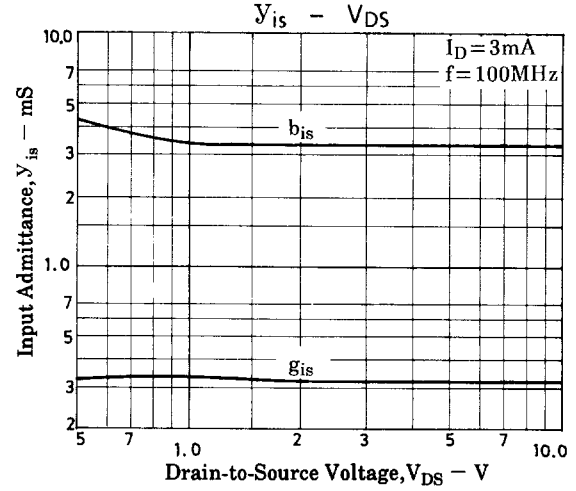
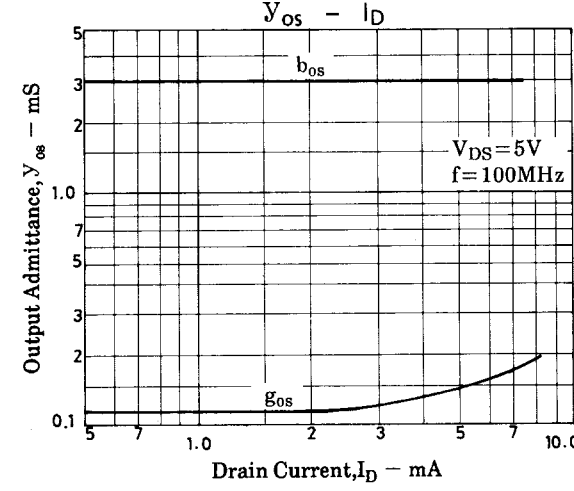
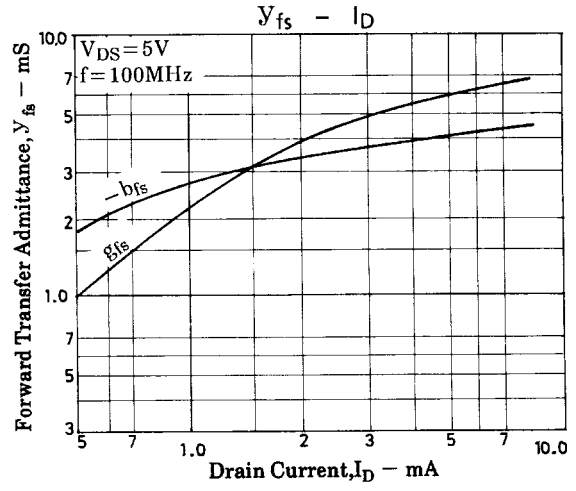
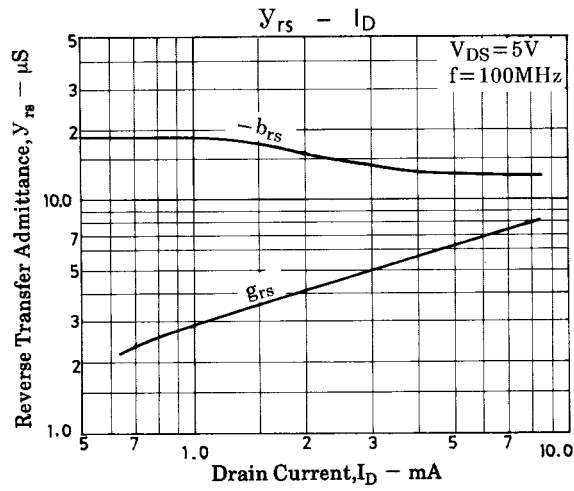
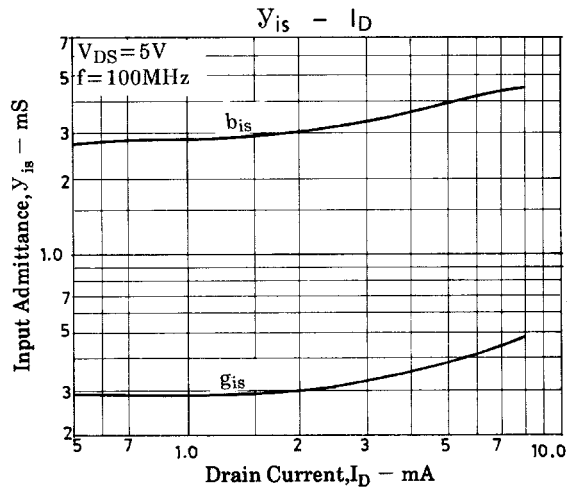
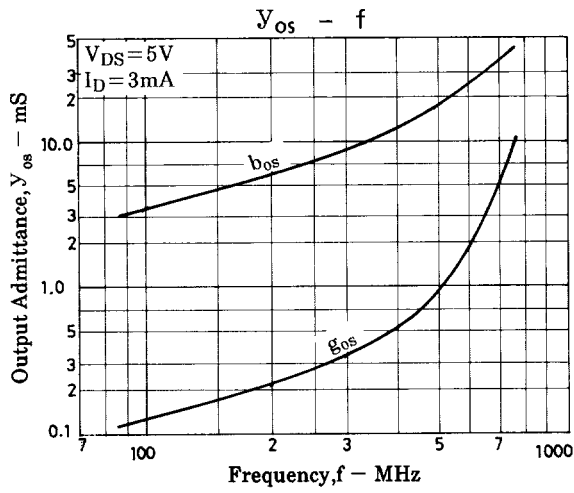
$L_2$ : 1mm $\phi$  plated wire 10mm $\phi$  6T, pitch 10mm,  
tap : 1T from drain side



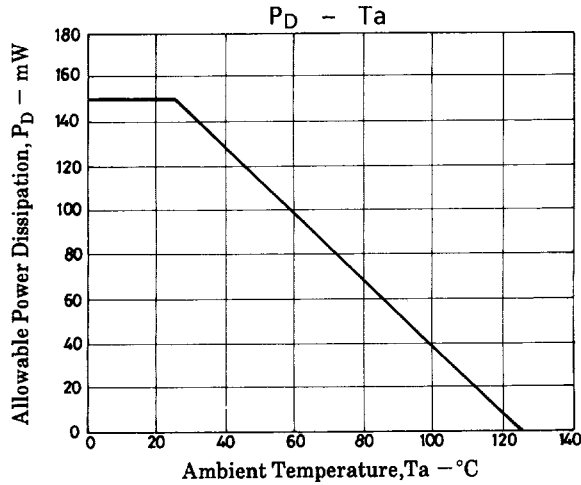
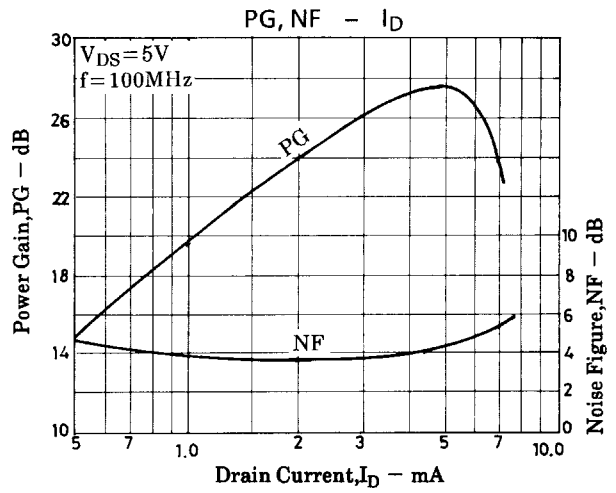
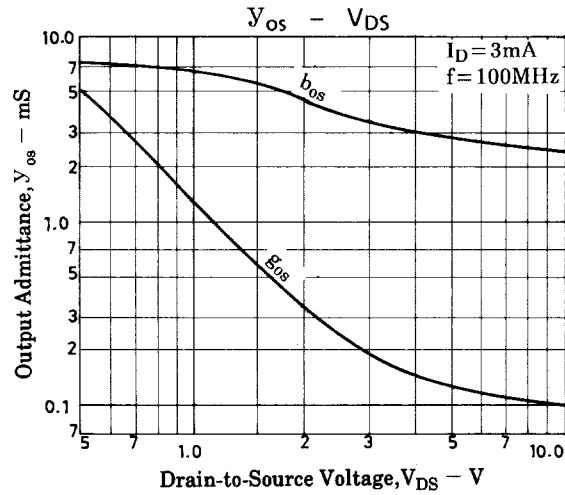
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