Ordering number:EN1405B

N-Channel Junction Silicon FET

2SK436

High-Frequency, Low-Frequency General-Purpose Amplifier Applications

Applications

· AM tuner RF amplifiers and low-noise amplifiers.

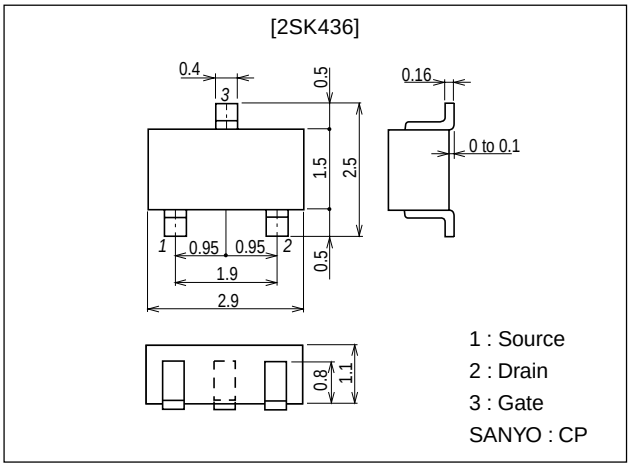
Features

· Large $|y_{fs}|$.
· Ultralow noise figure.
· Small Crss.
· Ultrasmall-sized package permitting 2SK436-applied sets to be made small and slim.

Package Dimensions

unit:mm

2050A



Specifications

Absolute Maximum Ratings at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		15	V
Gate-to-Drain Voltage	V_{GDS}		–15	V
Gate Current	I_G		10	mA
Drain Current	I_D		20	mA
Allowable Power Dissipation	P_D		150	mW
Junction Temperature	Tj		125	˚C
Storage Temperature	Tstg		–55 to +125	˚C

Electrical Characteristics at Ta = 25˚C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDS}$	I_G=–10μA, V_{DS}=0	–15			V
Gate-to-Source Leakage Current	I_{GSS}	V_{GS}=–10V, V_{DS}=0			–1.0	nA
Zero-Gate Voltage Drain Current	I_{DSS}*	V_{DS}=5V, V_{GS}=0	1.2*		12.0*	mA
Cutoff Voltage	$V_{GS(off)}$	V_{DS}=5V, I_D=100μA		–0.5	–1.5	V
Forward Transfer Admittance	| yfs |	V_{DS}=5V, V_{GS}=0, f=1kHz	8.0	17		mS
Input Capacitance	Ciss	V_{DS}=5V, V_{GS}=0, f=1MHz		7.0		pF
Reverse Transfer Capacitance	Crss	V_{DS}=5V, V_{GS}=0, f=1MHz		2.0		pF
Noise Figure	NF	V_{DS}=5V, I_D=1mA, Rg=1kΩ, f=1kHz		1.5		dB

* : The 2SK436 is classified by I_{DSS} as follows : (unit : mA)

1.2	17	2.1	1.7	18	3.0	2.5	19	4.2
3.5	20	6.0	5.0	21	8.5	7.3	22	12.0

Note) Marking : A
I_{DSS} rank : 17, 18, 19, 20, 21, 22

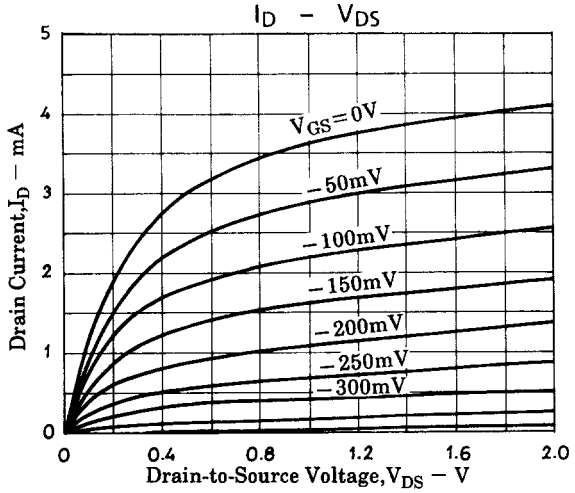
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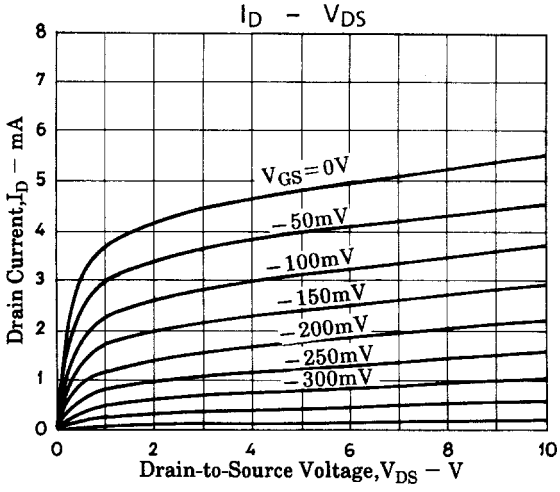
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TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

42099TH (KT)/90895MO (KOTO)/6017KI/N283KI, TS (KOTO) 8-5846 No.1405–1/6

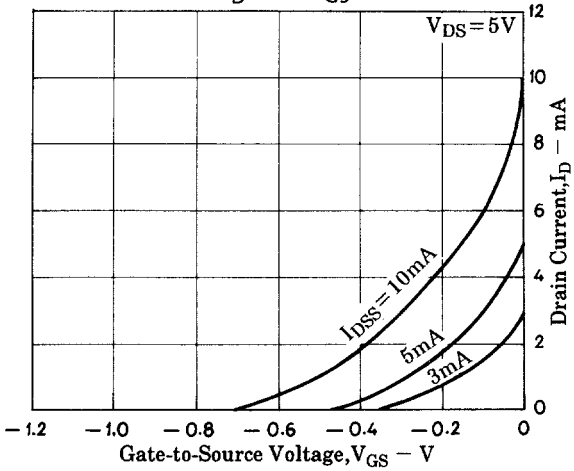
I_D – V_{DS}



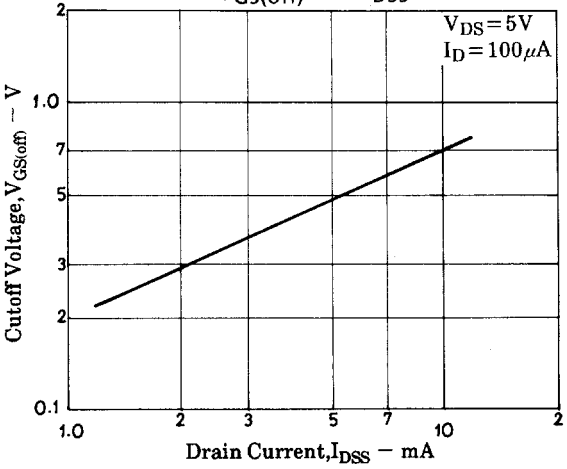
I_D – V_{DS}



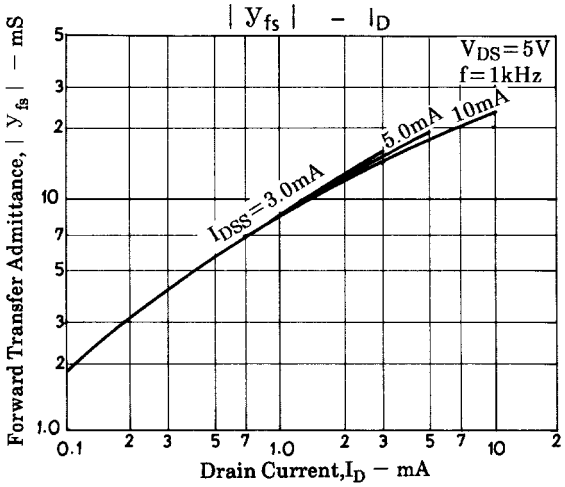
I_D – V_{GS}



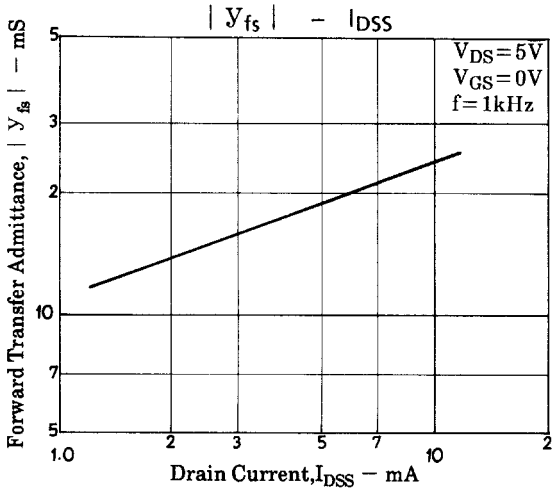
$V_{GS(off)}$ – I_{DSS}



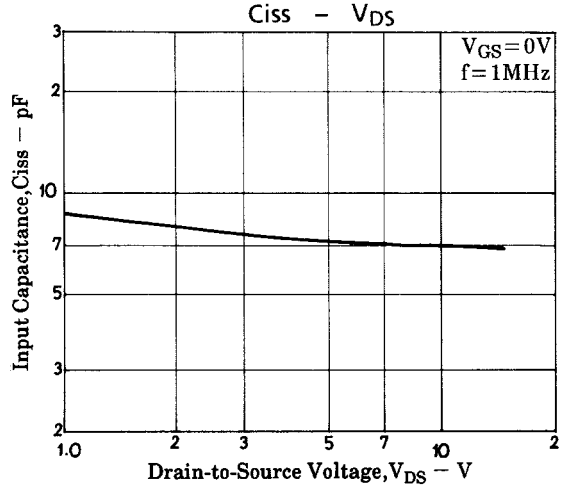
$|y_{fs}|$ – I_D



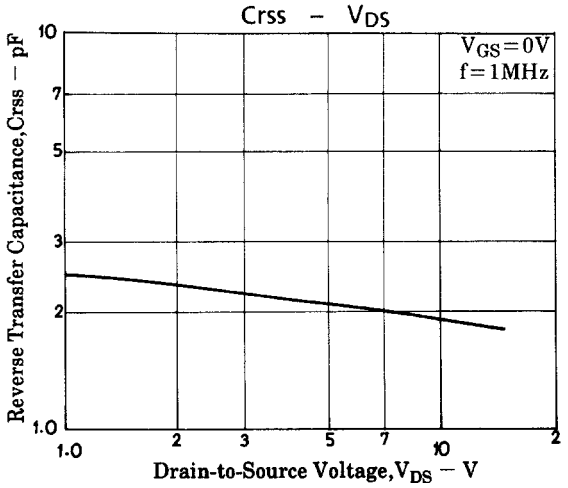
$|y_{fs}|$ – I_{DSS}



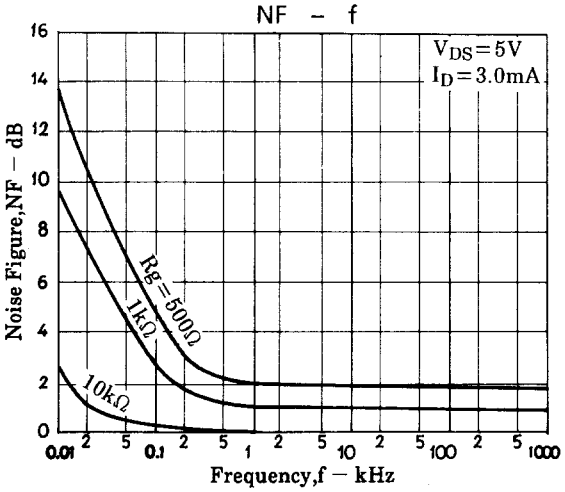
Ciss – V_{DS}



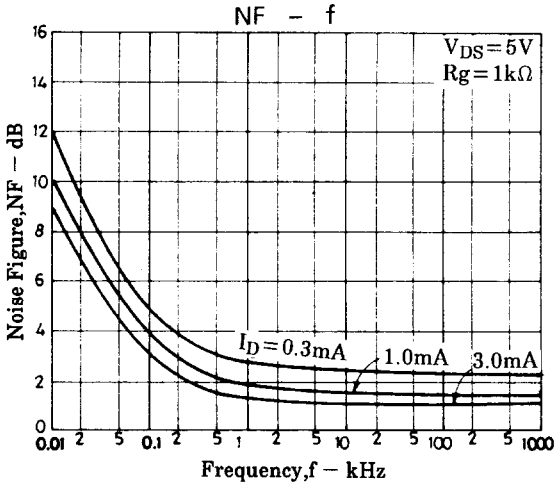
Crss – V_{DS}



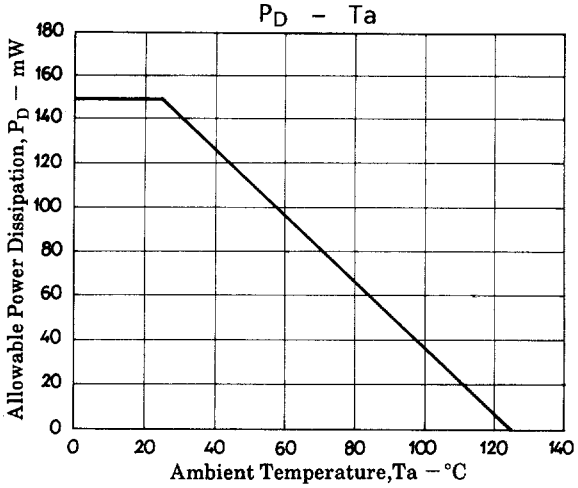
NF – f



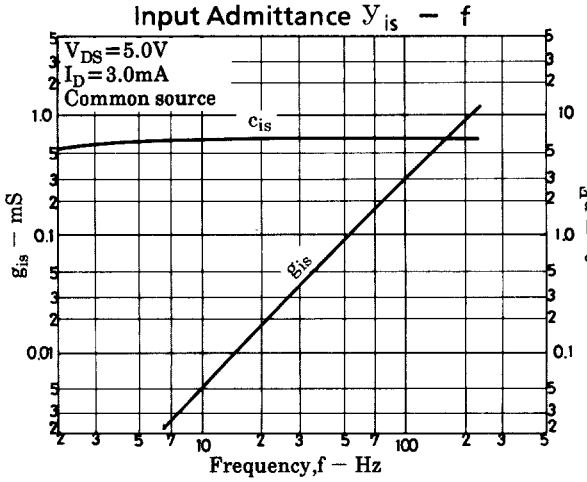
NF – f



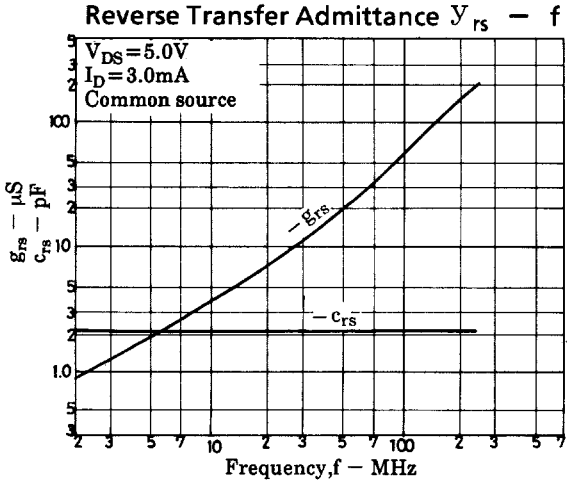
P_D – Ta



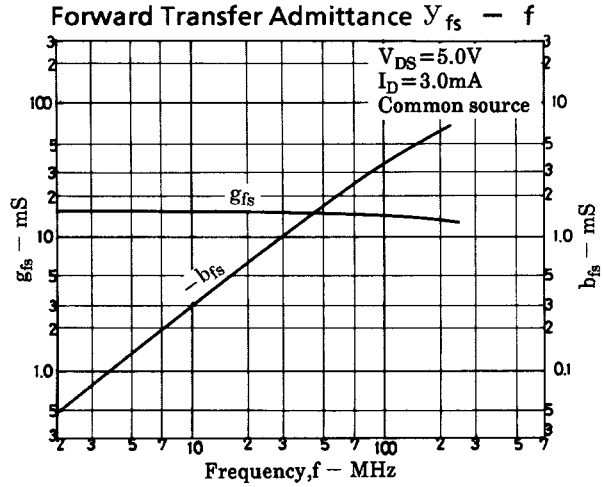
Input Admittance y_{is} – f



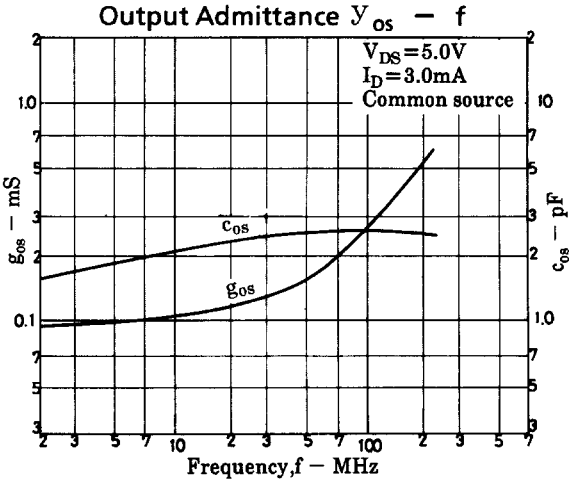
Reverse Transfer Admittance y_{rs} – f



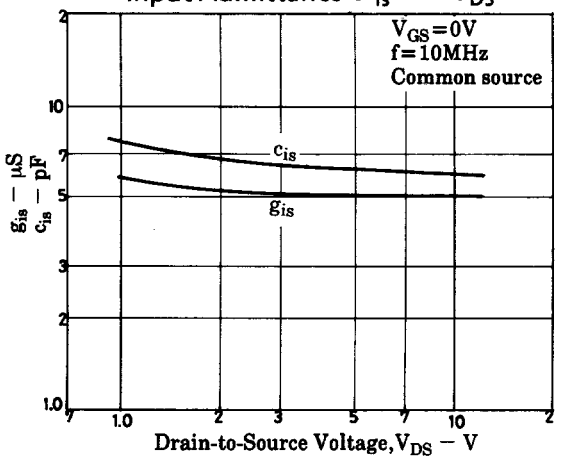
Forward Transfer Admittance y_{fs} – f



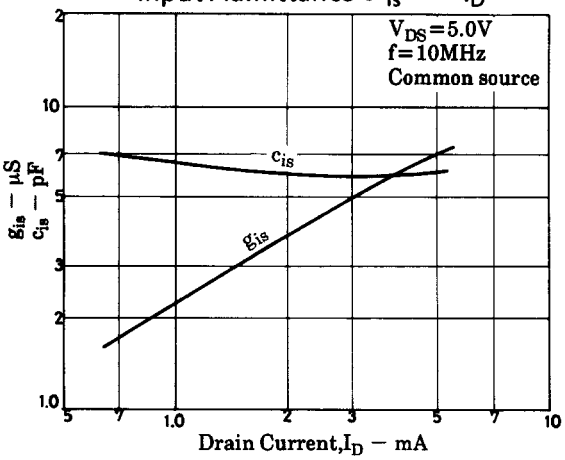
Output Admittance y_{os} – f



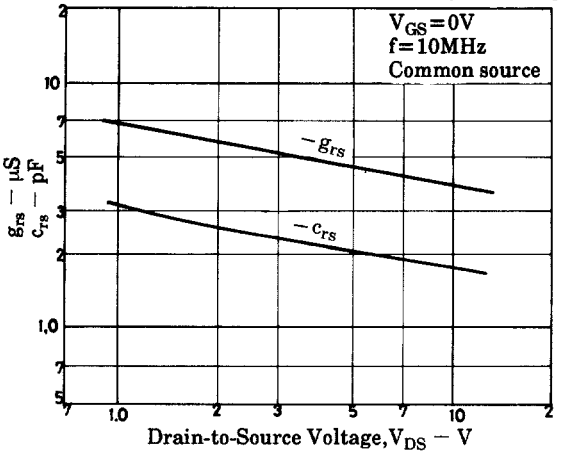
Input Admittance y_{is} — V_{DS}



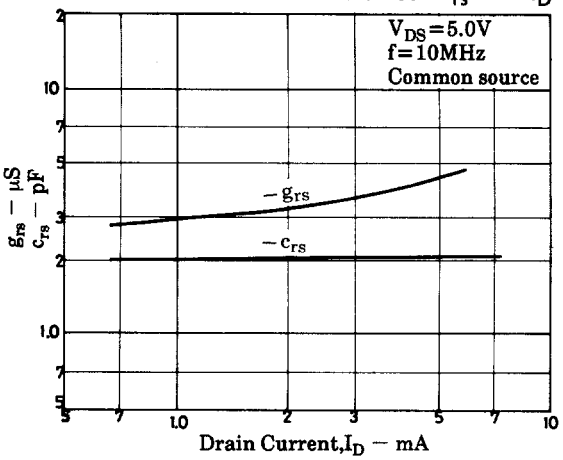
Input Admittance y_{is} — I_D



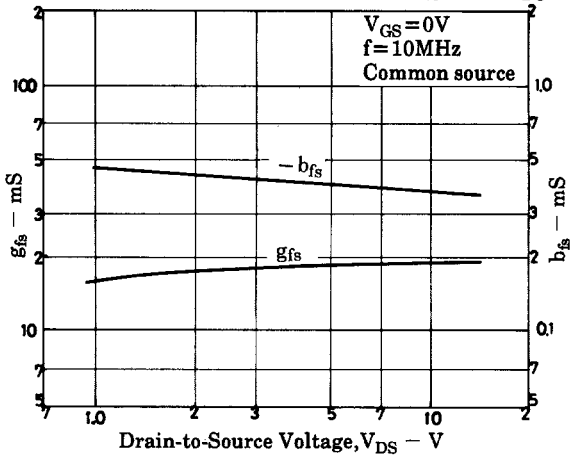
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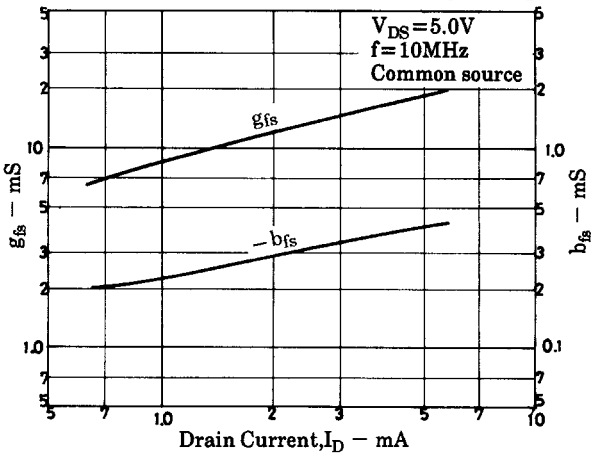
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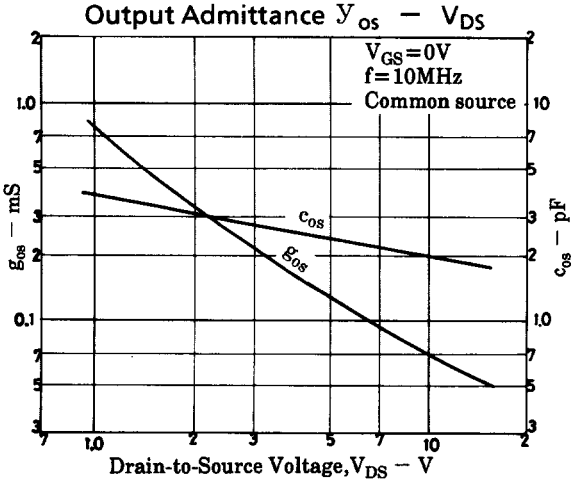
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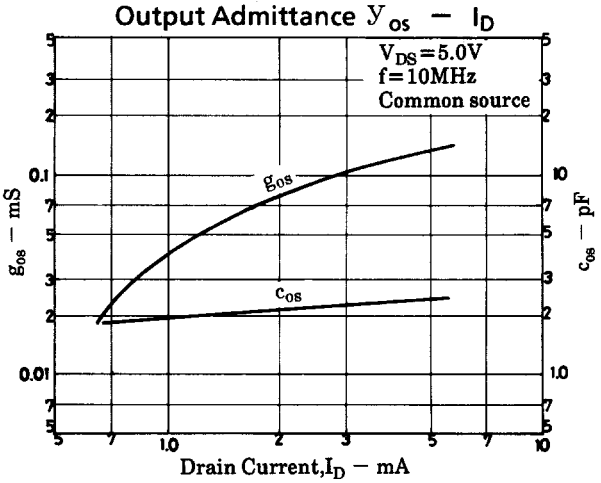
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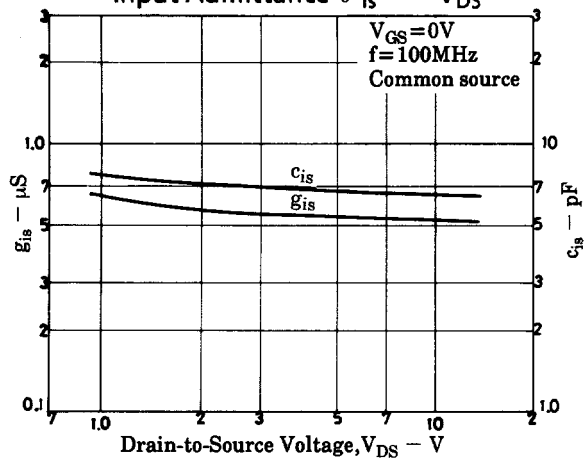
Output Admittance y_{os} — V_{DS}



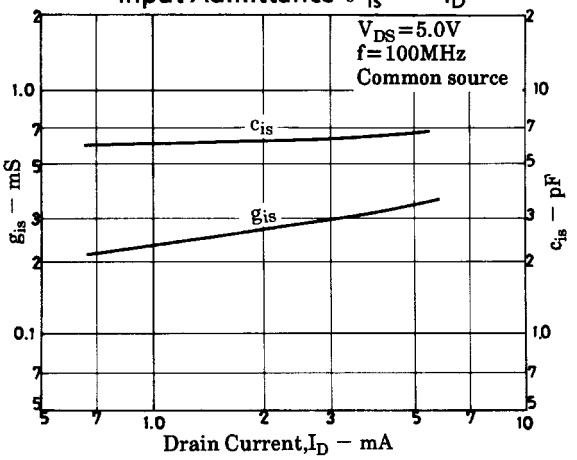
Output Admittance y_{os} — I_D



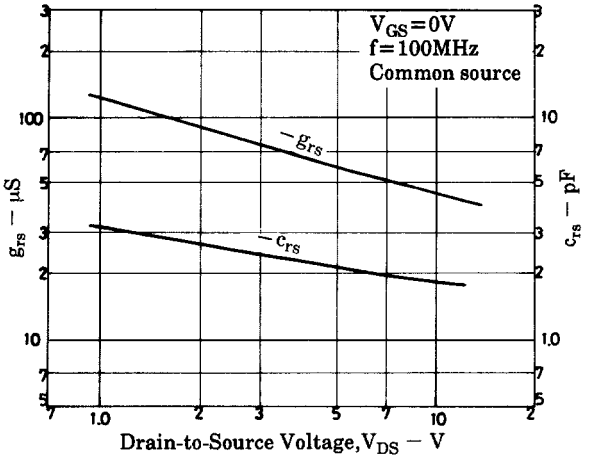
Input Admittance y_{is} — V_{DS}



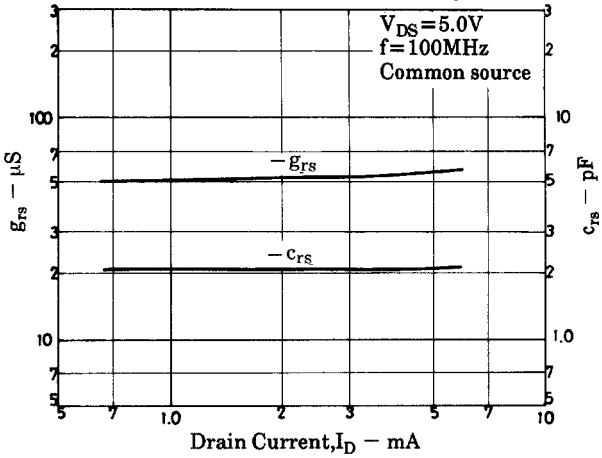
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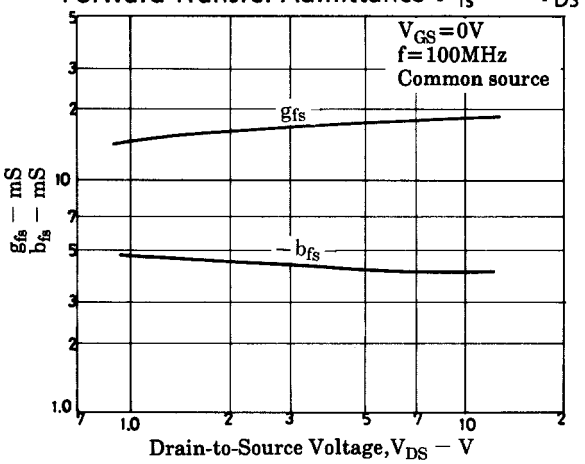
Reverse Transfer Admittance y_{rs} — V_{DS}



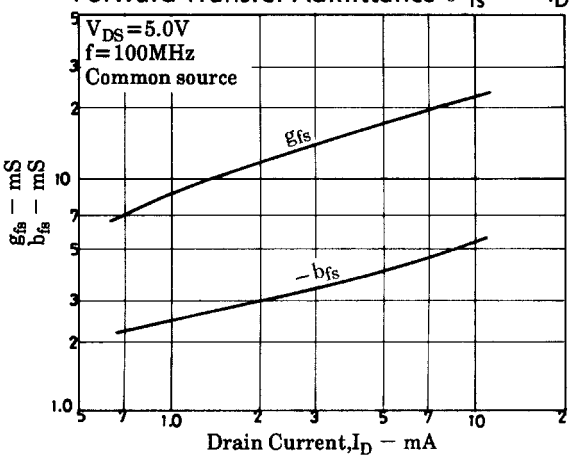
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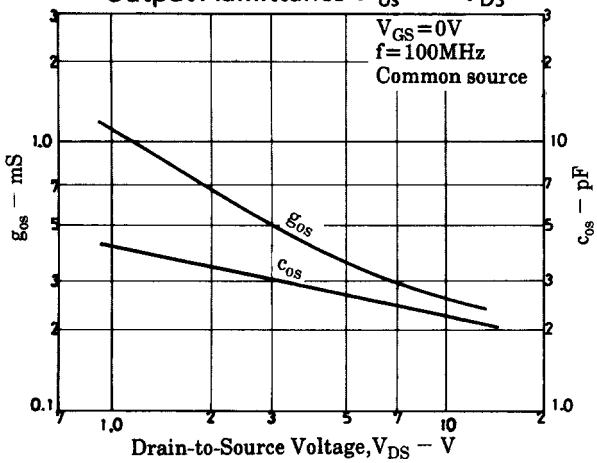
Forward Transfer Admittance y_{fs} — V_{DS}



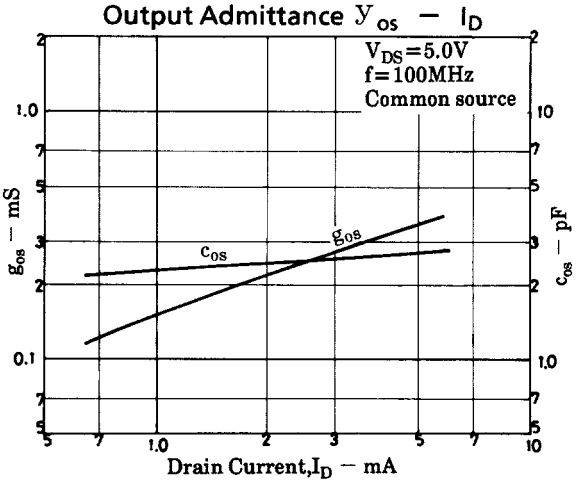
Forward Transfer Admittance y_{fs} — I_D



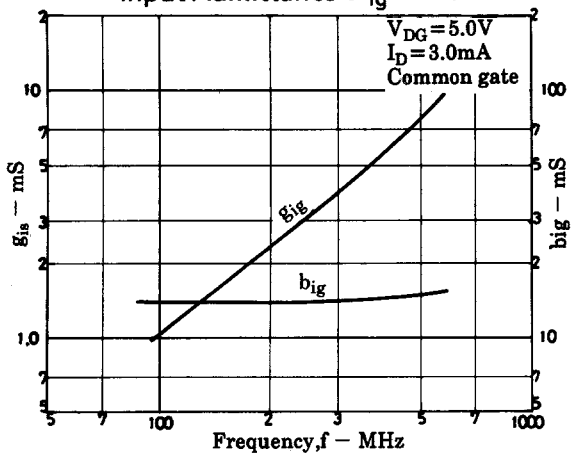
Output Admittance y_{os} — V_{DS}



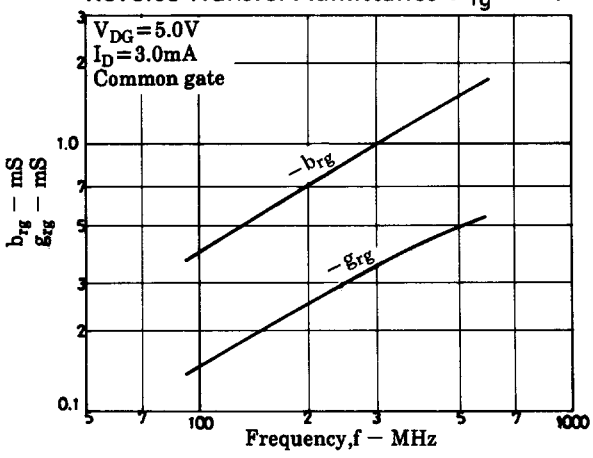
Output Admittance y_{os} — I_D



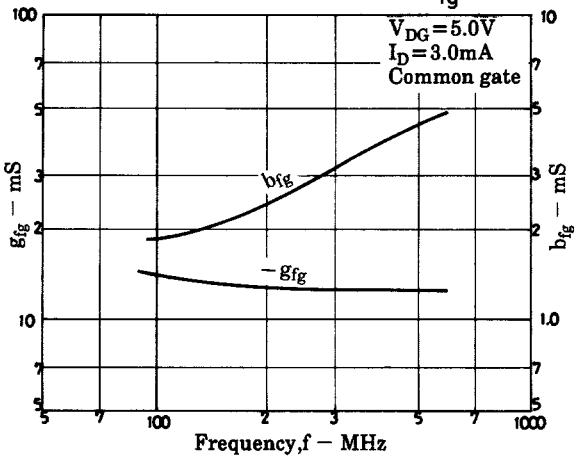
Input Admittance y_{ig} – f



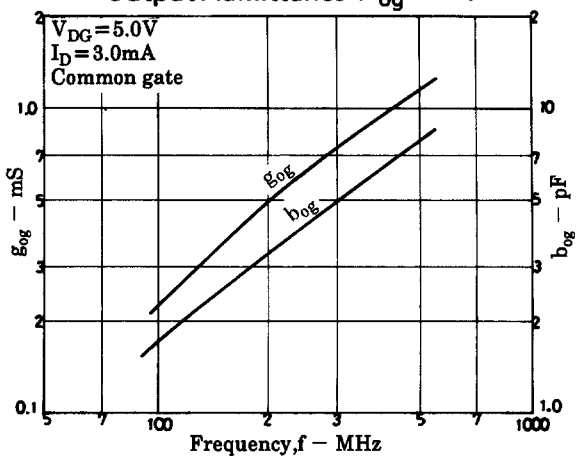
Reverse Transfer Admittance y_{rg} – f



Forward Transfer Admittance y_{fg} – f



Output Admittance y_{og} – f



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