Ordering number: EN1791C

SANYO No.1791C

2SK543

N-Channel MOS Silicon FET

FM Tuner, VHF-Band Amp Applications

Features

- Low noise. NF=1.8dB typ(f=100MHz)
- High power gain. PG=27dB typ(f=100MHz)
- Small reverse transfer capacitance. C_{rss}=0.035pF(V_{DS}=10V,f=1MHz)

Absolute Maximum Ratings at Ta=25°C

			unit
Drain to Source Voltage	V_{DS}	20	V
Gate to Source Voltage	V_{GS}	±5	V
Drain Current	I_D	30	mA
Allowable Power Dissipation	P_D	200	mW
Channel Temperature	Tch	125	°C
Storage Temperature	Tstg	-55 to +125	°C

Electrical Characteristics at Ta=25°C

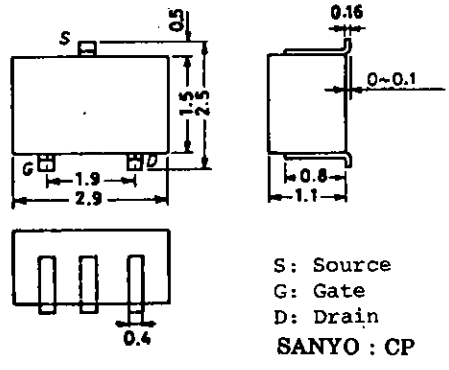
			min	typ	max	unit
Drain to Source Voltage	V_{DSX}	V_{GS}=-4V,I_D=100μA	20			V
Common Source Gate Cutoff Current	I_{GSS}	V_{DS}=0V,V_{GS}=±5V			10	nA
Drain Current	I_{DSS}	V_{DS}=10V,V_{GS}=0V	1.2*		12*	mA
Gate to Source Cutoff Voltage	$V_{GS(off)}$	V_{DS}=10V,I_D=100μA			-2.5	V
Forward Transfer Admittance	$\|yfs\|$	V_{DS}=10V,V_{GS}=0V f=1kHz	11			mS
Input Capacitance	C_{iss}	V_{DS}=10V,V_{GS}=0V	2.4			pF
Reverse Transfer Capacitance	C_{rss}	f=1MHz	0.035			pF
Power Gain	PG	V_{DS}=10V,V_{GS}=0V	27			dB
Noise Figure	NF	f=100MHz	1.8		3.0	dB
		See specified Test Circuit.				

*: The 2SK543 is classified by I_{DSS} as follows (unit:mA):

1.2 3 3.0	2.5 4 6.0	5.0 5 12

(Note) Marking :CJ
I_{DSS} rank: 3,4,5

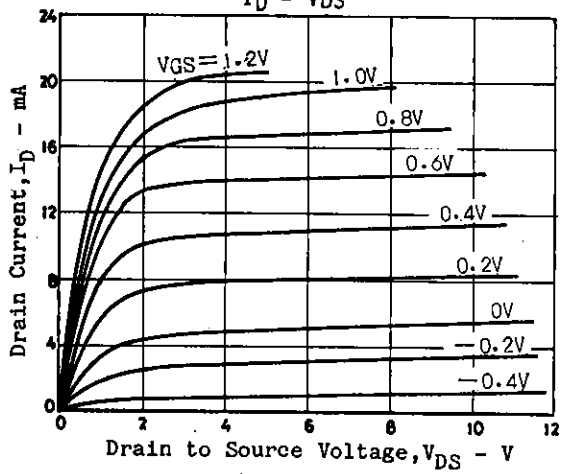
Package Dimensions 2024A
(unit:mm)



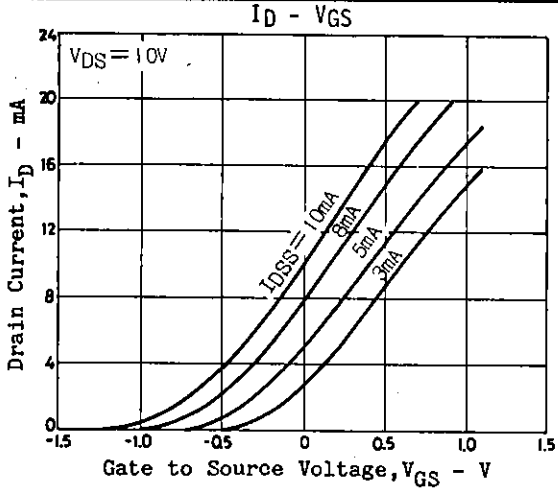
S: Source
G: Gate
D: Drain
SANYO : CP

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

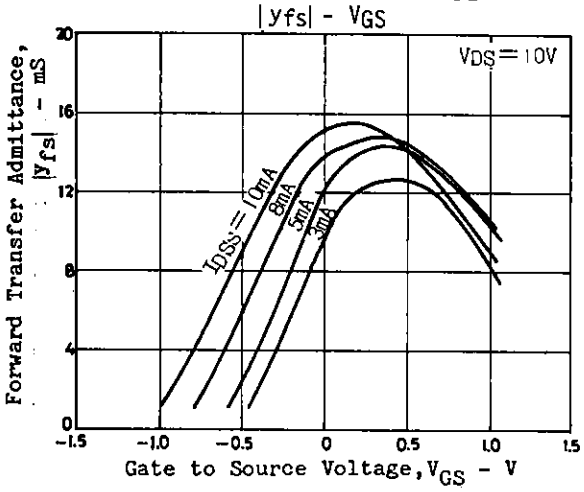
I_D - V_{DS}



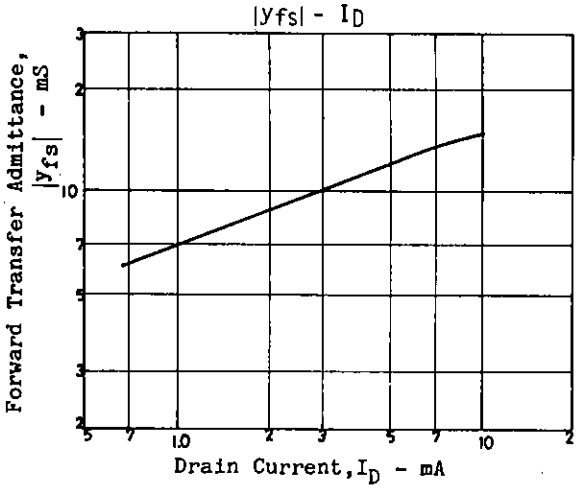
I_D - V_{GS}



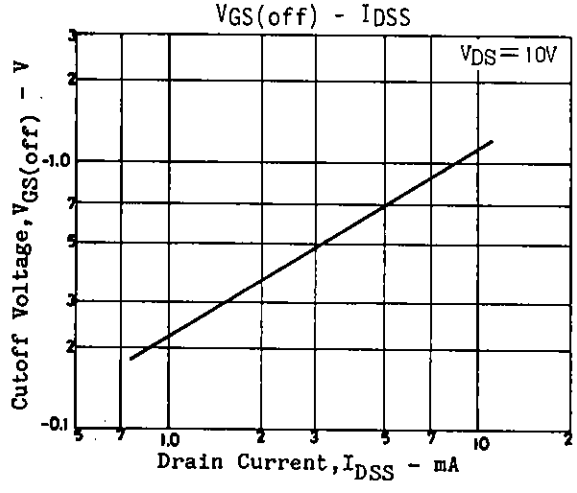
|yfs| - V_{GS}



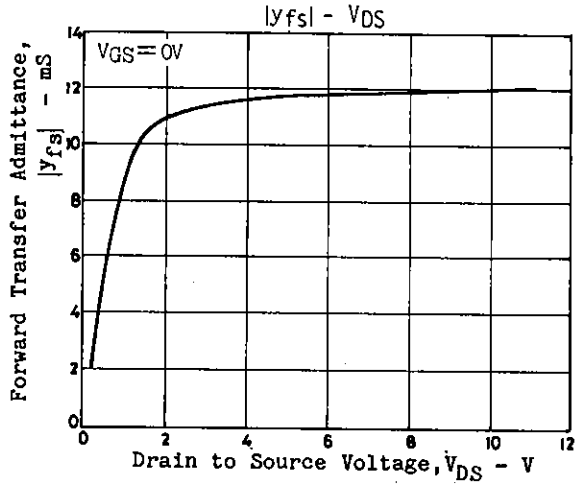
|yfs| - I_D



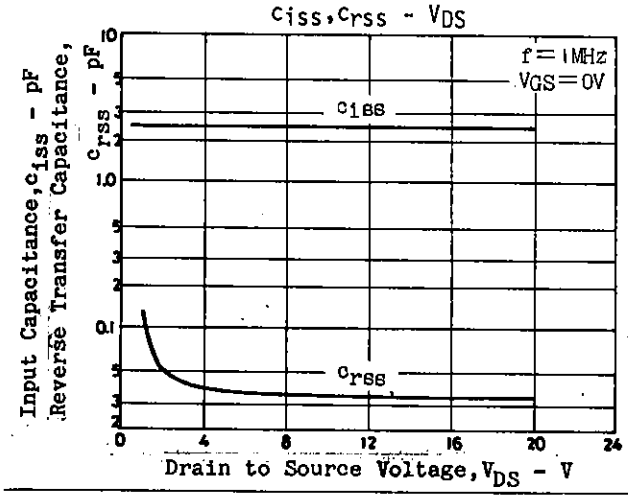
$V_{GS(off)}$ - I_{DSS}



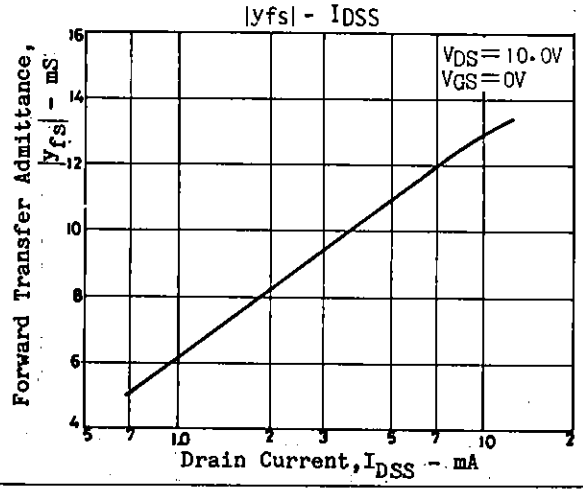
|yfs| - V_{DS}



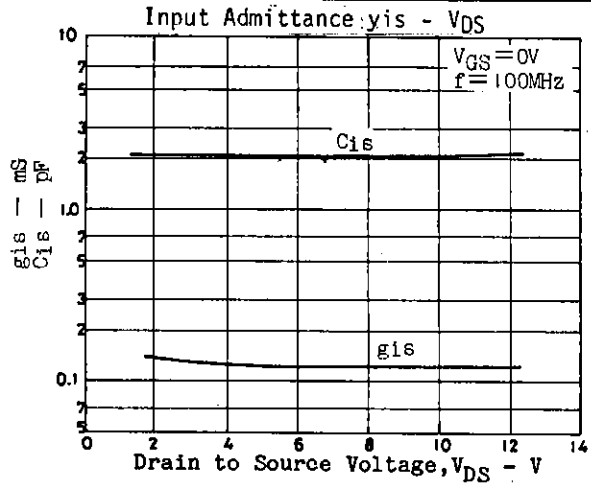
Ciss, Crss - V_{DS}



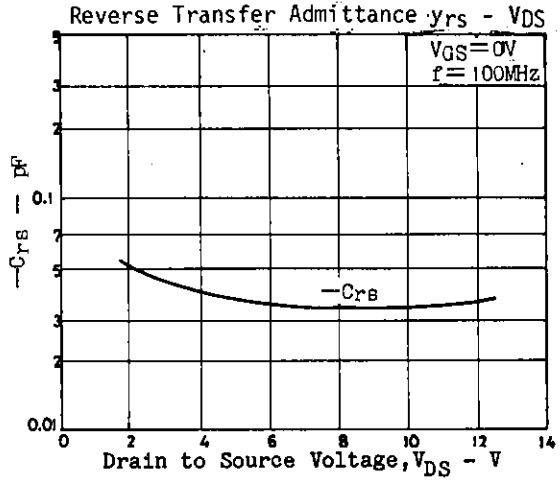
|yfs| - I_{DSS}



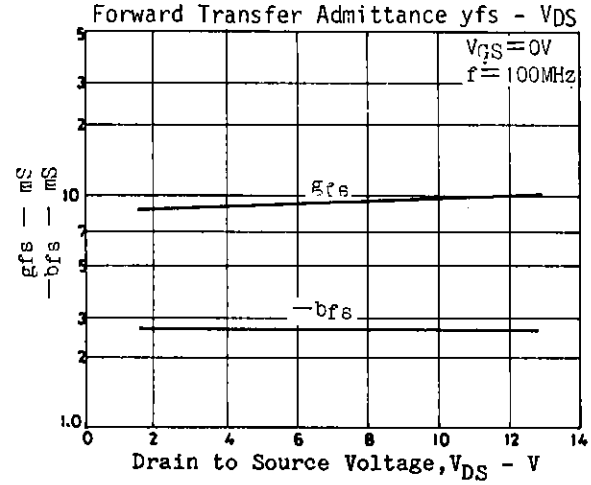
Input Admittance yis - V_{DS}



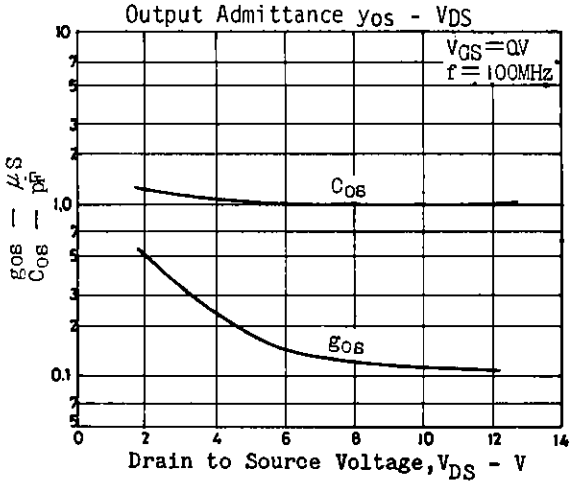
Reverse Transfer Admittance yrs - V_{DS}



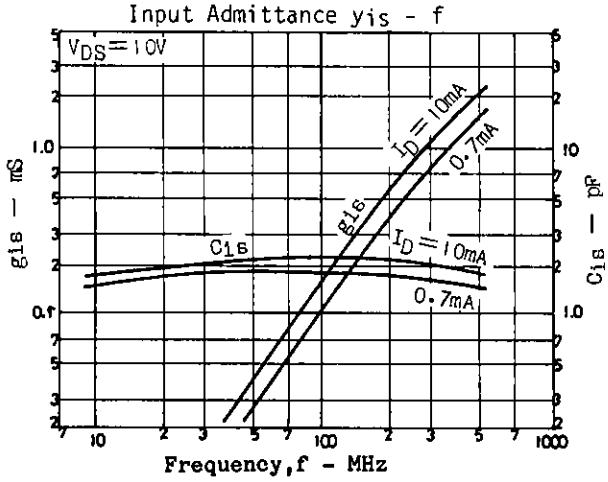
Forward Transfer Admittance yfs - V_{DS}



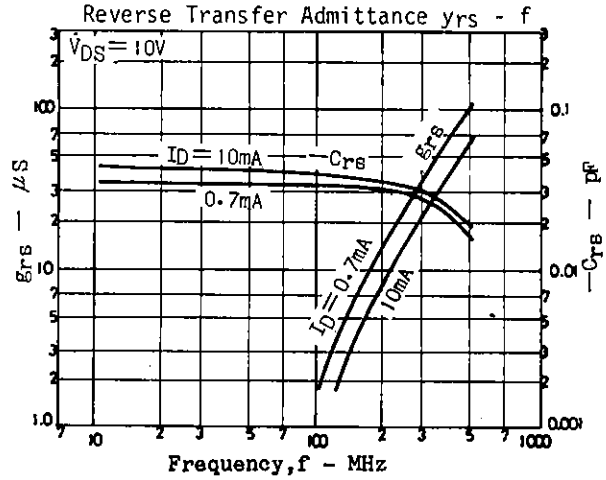
Output Admittance yos - V_{DS}



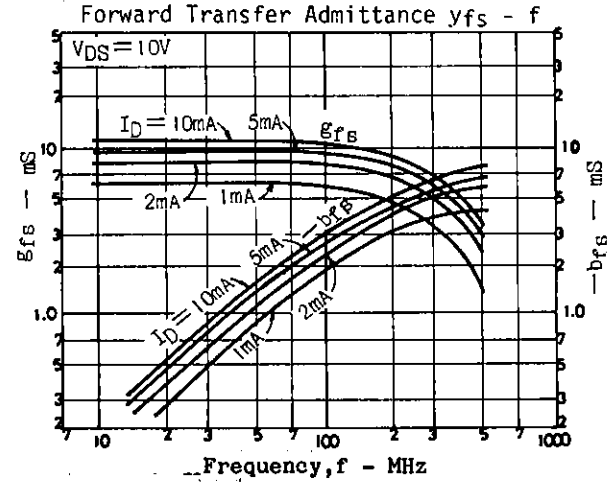
Input Admittance yis - f



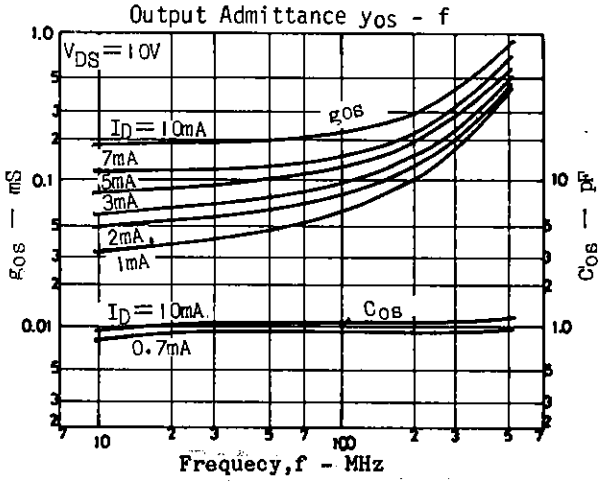
Reverse Transfer Admittance yrs - f

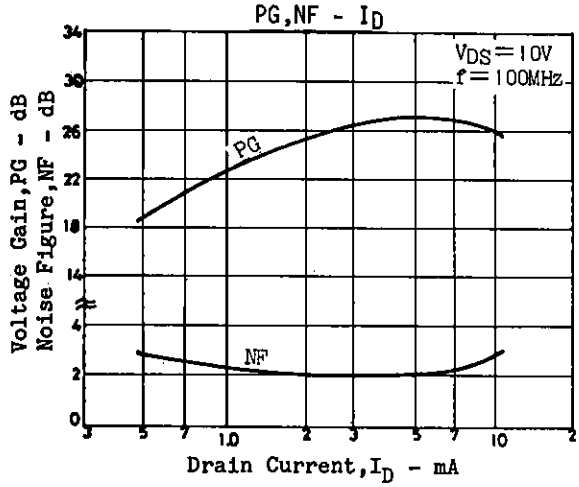


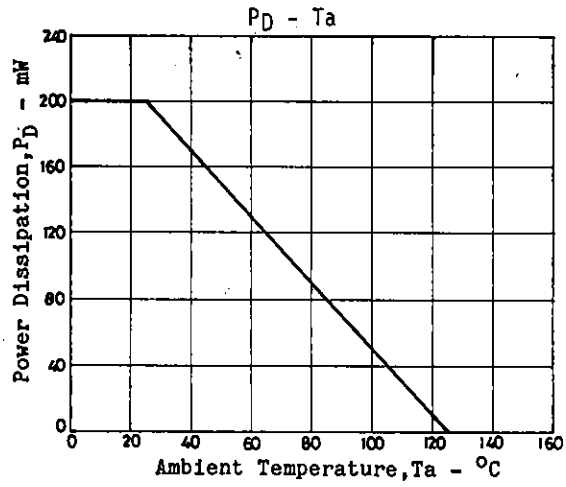
Forward Transfer Admittance yfs - f



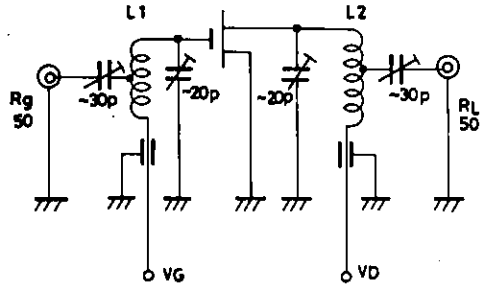
Output Admittance yos - f







PG,NF Test Circuit



L1: 1mmø plated wire 10mmø 6T, tap: 3T from H side
L2: 1mmø plated wire 10mmø 7T, tap: 4T from H side

Unit (Resistance : Ω, Capacitance : F)

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