

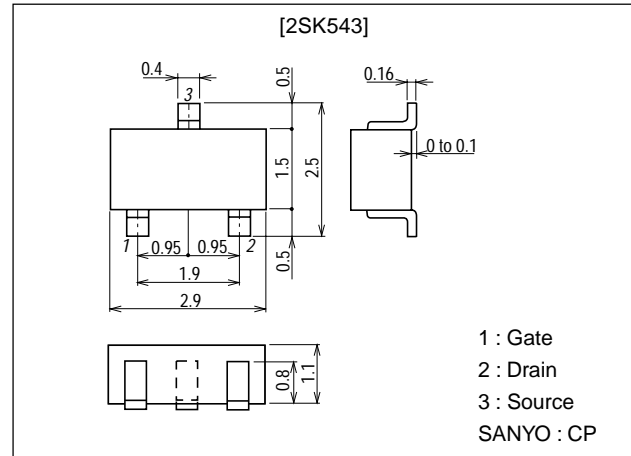
**2SK543****FM Tuner, VHF-Band Amplifier Applications****Features**

- Low noise. NF=1.8dB typ (f=100MHz).
- High power gain. PG=27dB typ (f=100MHz).
- Small reverse transfer capacitance. Crss=0.035pF (V<sub>DS</sub>=10V, f=1MHz).

**Package Dimensions**

unit:mm

2024B

**Specifications****Absolute Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DS</sub>		20	V
Gate-to-Source Voltage	V <sub>GS</sub>		±5	V
Drain Current	I <sub>D</sub>		30	mA
Allowable Power Dissipation	P <sub>D</sub>		200	mW
Channel Temperature	T <sub>ch</sub>		125	°C
Storage Temperature	T <sub>stg</sub>		-55 to +125	°C

**Electrical Characteristics at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Voltage	V <sub>DSX</sub>	V <sub>GS</sub> =-4V, I <sub>D</sub> =100μA	20			V
Gate-to-Source Leakage Current	I <sub>GSS</sub>	V <sub>DS</sub> =0V, V <sub>GS</sub> =±5V			10	nA
Zero-Gate Voltage Drain Current	I <sub>DSS</sub> *	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V	1.2*		12*	mA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =100μA			-2.5	V
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, f=1kHz		11		mS
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, f=1MHz		2.4		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, f=1MHz		0.035		pF

\* : The 2SK543 is classified by I<sub>DSS</sub> as follows (unit : mA) :

1.2	3	3.0	2.5	4	6.0	5.0	5	12
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(Note) Marking : CJ  
I<sub>DSS</sub> rank : 3, 4, 5

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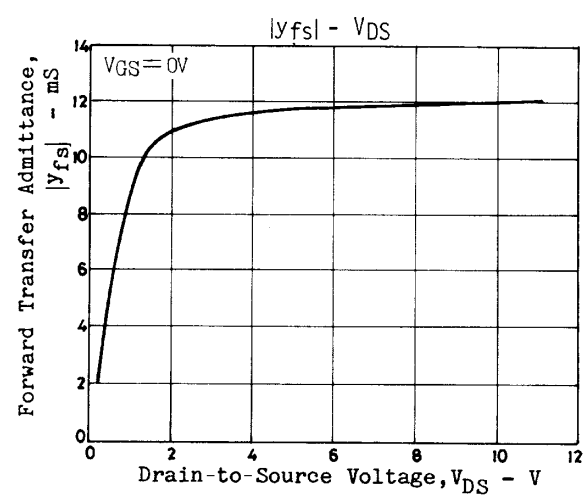
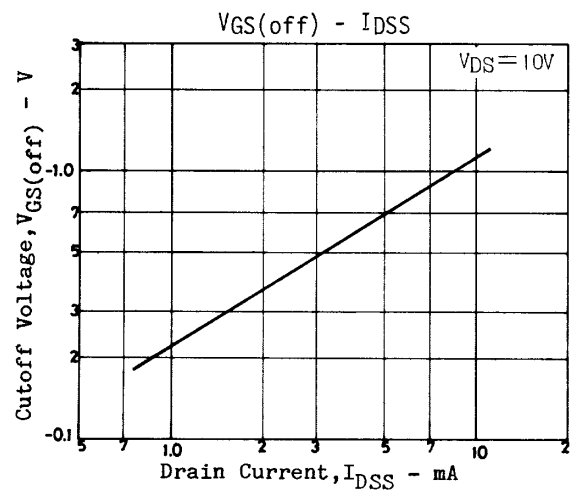
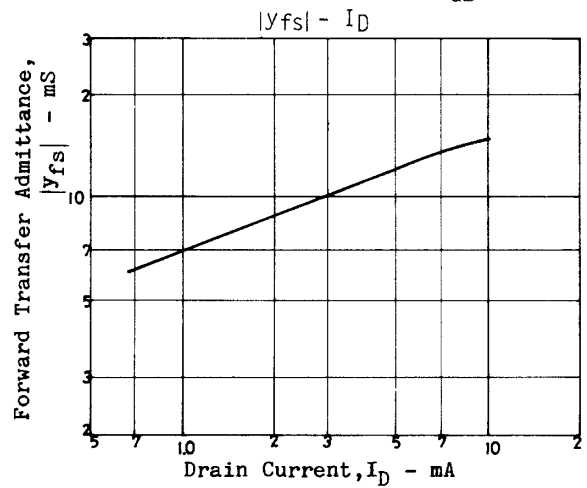
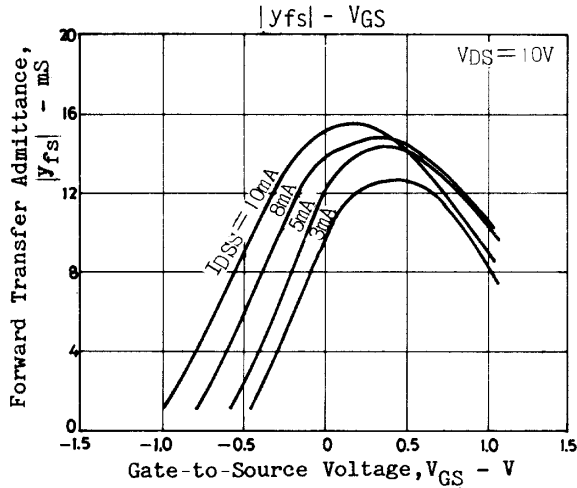
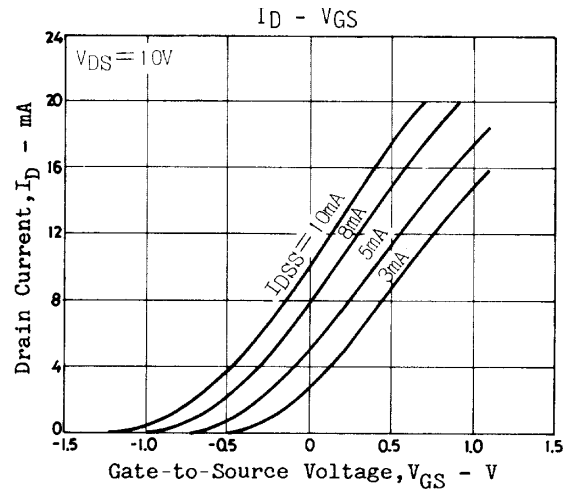
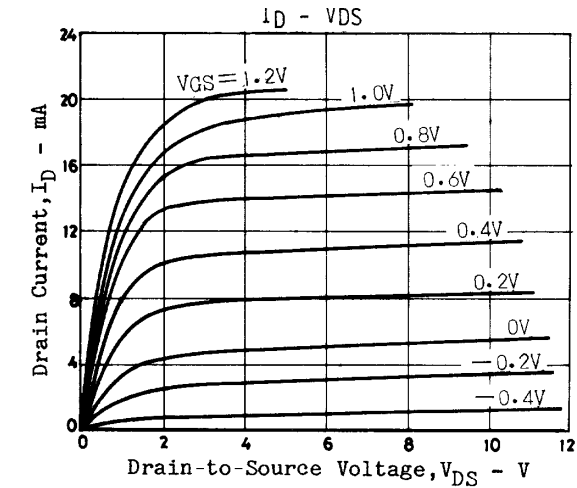
**SANYO Electric Co.,Ltd. Semiconductor Company**

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

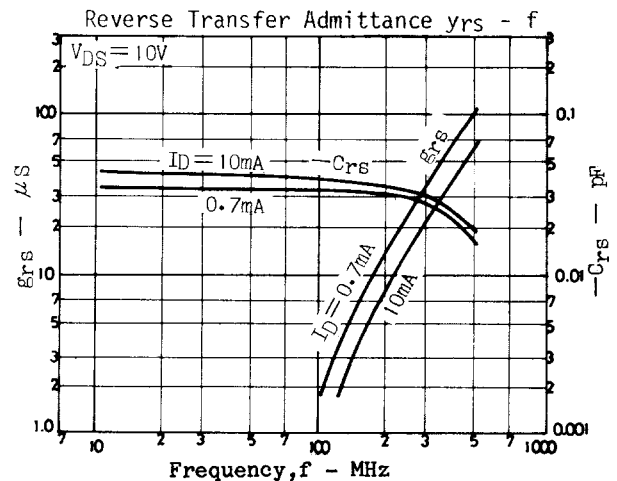
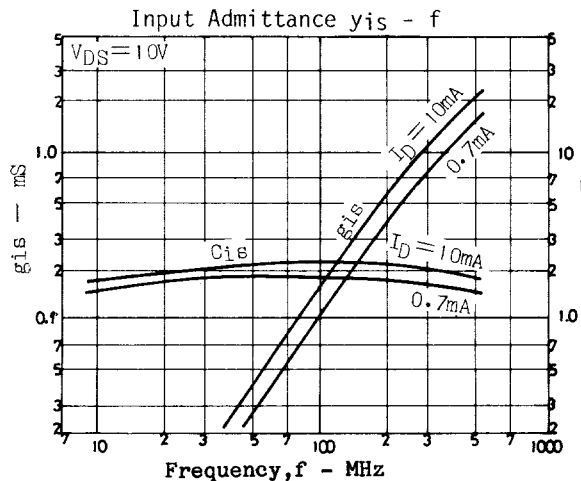
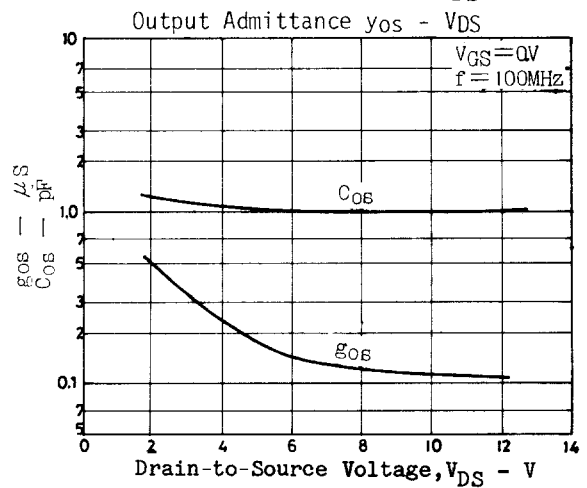
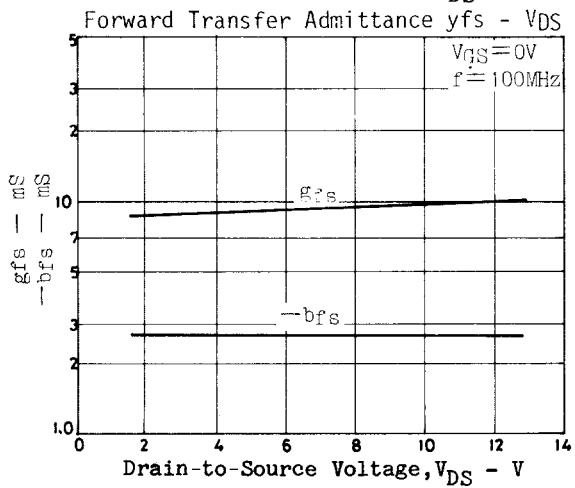
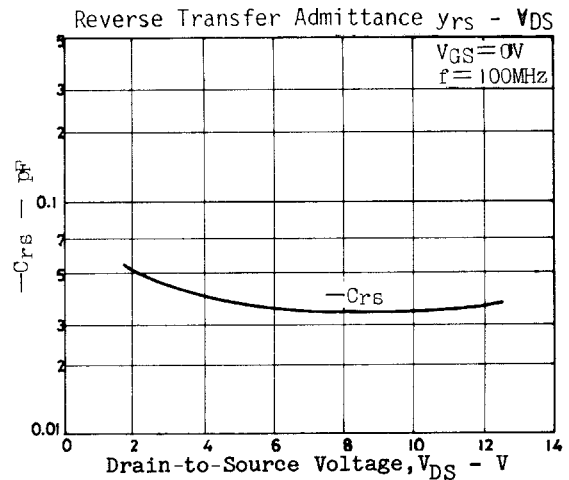
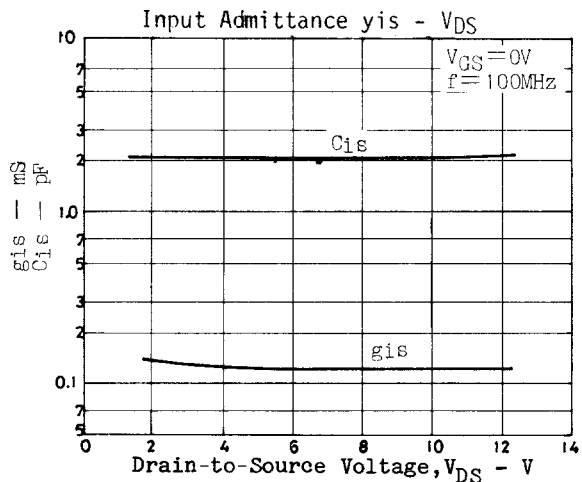
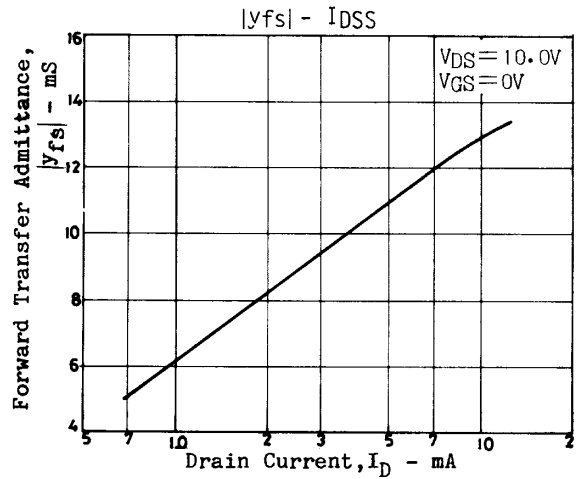
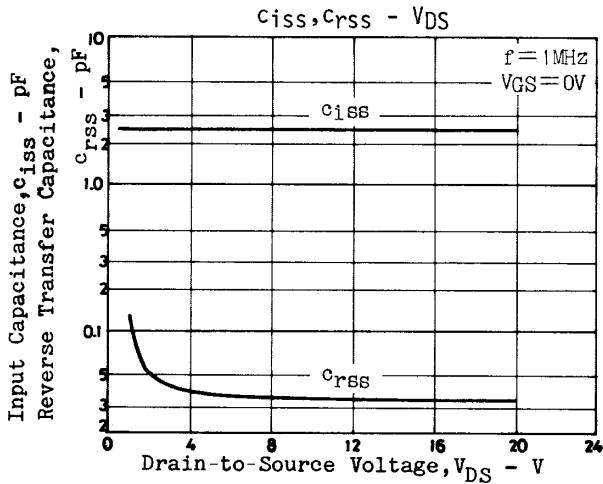
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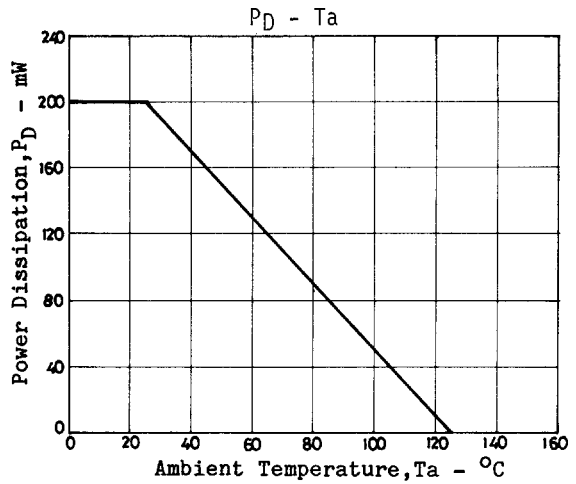
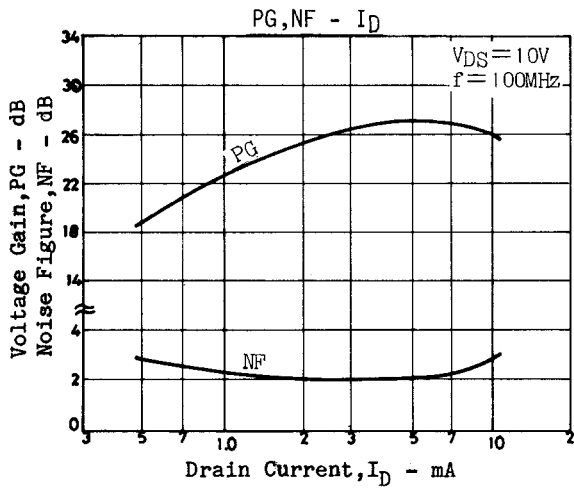
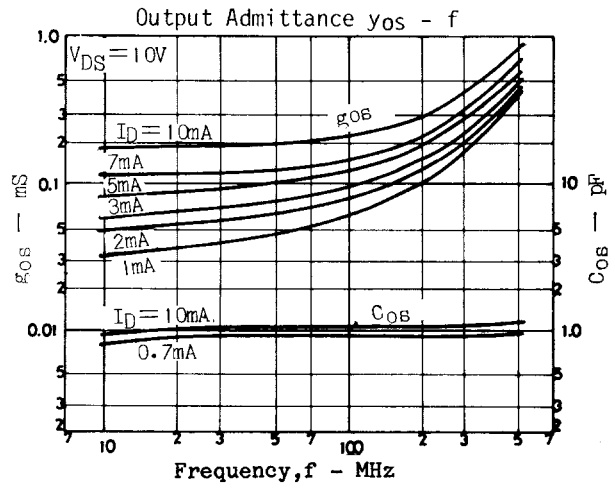
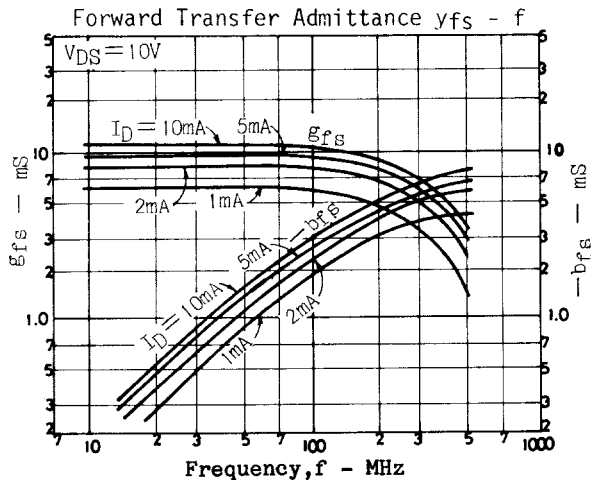
Parameter	Symbol	Conditions	Ratings		Unit
Power Gain	PG	$V_{DS}=10V, V_{GS}=0V, f=100MHz$ , See specified Test Circuit	27		dB
Noise Figure	NF	$V_{DS}=10V, V_{GS}=0V, f=100MHz$ , See specified Test Circuit	1.8	3.0	dB



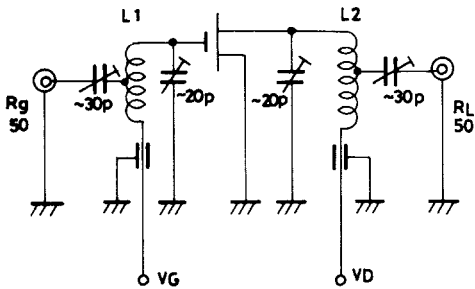
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## PG, NF Specified Test Circuit



- L1: 1mm $\phi$  plated wire 10mm $\phi$  6T, tap: 3T from H side
- L2: 1mm $\phi$  plated wire 10mm $\phi$  7T, tap: 4T from H side

Unit (resistance :  $\Omega$ , capacitance : F)

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