



# 2SK544

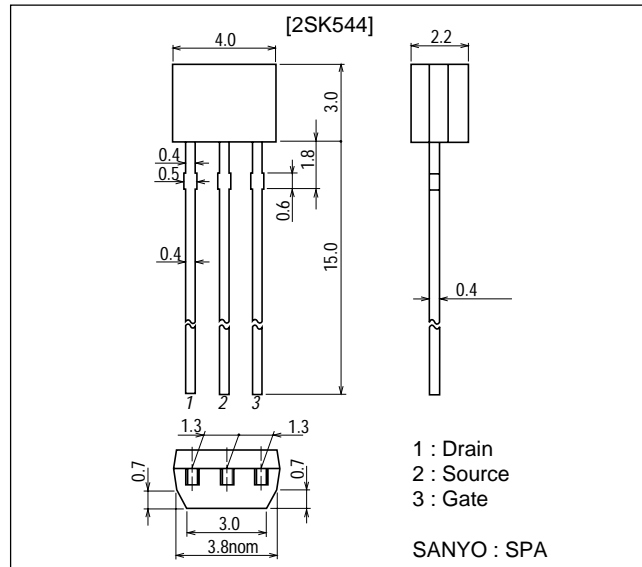
## FM Tuner, VHF Amplifier Applications

### 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  
2040A



### 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>		300	mW
Channel Temperature	T <sub>ch</sub>		125	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°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>GS</sub>	V <sub>DS</sub> =0, 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> =0	1.2*		12*	mA
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> =10V, I <sub>D</sub> =100μA			-2.5	V

\* : The 2SK544 is classified by I<sub>DSS</sub> as follows (unit : mA) :

Rank	D	E	F
I <sub>DSS</sub>	1.2 to 3.0	2.5 to 6.0	5.0 to 12

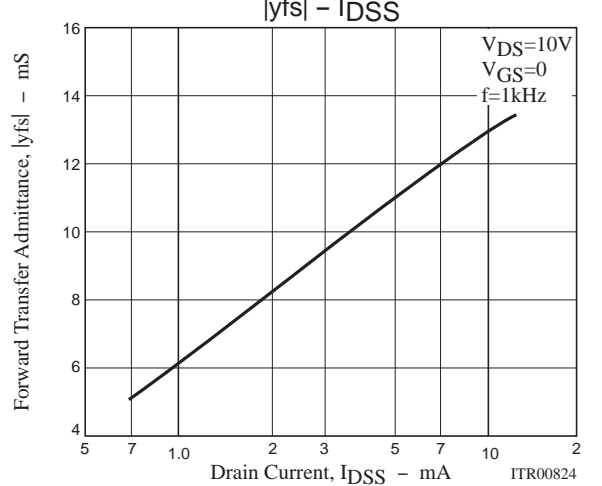
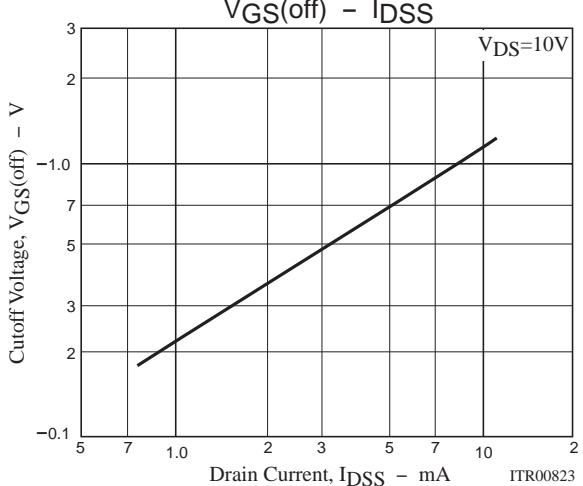
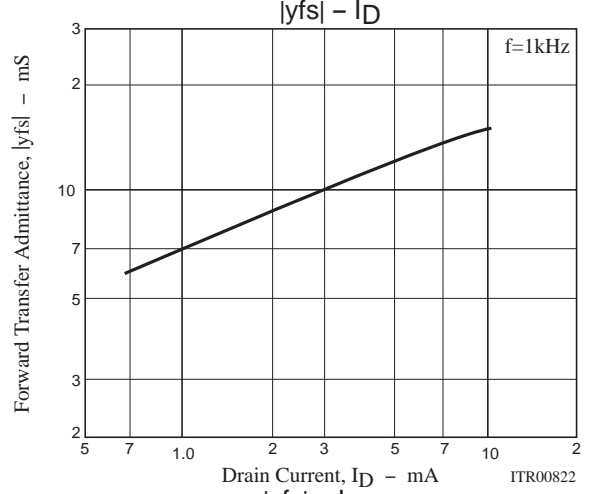
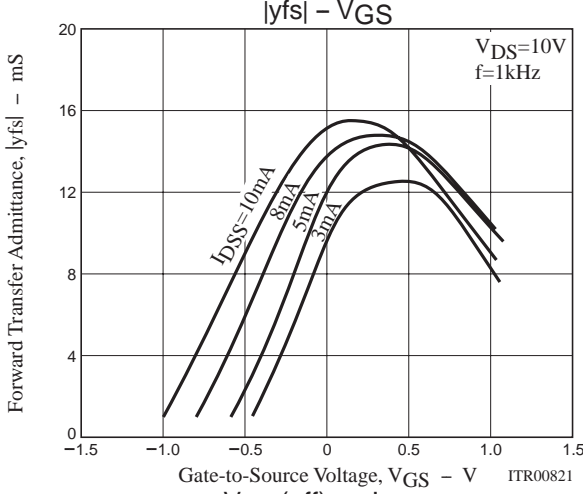
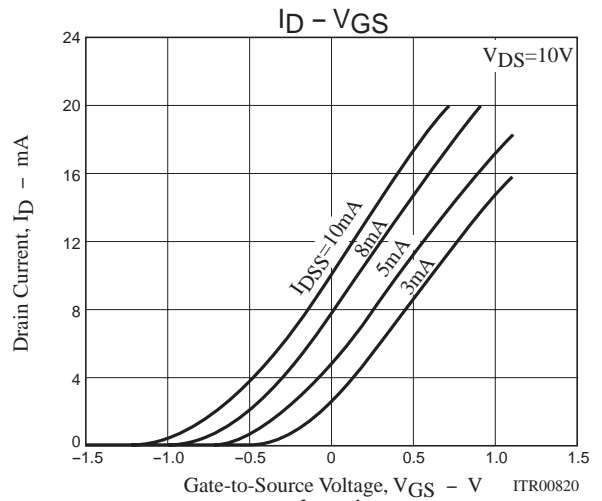
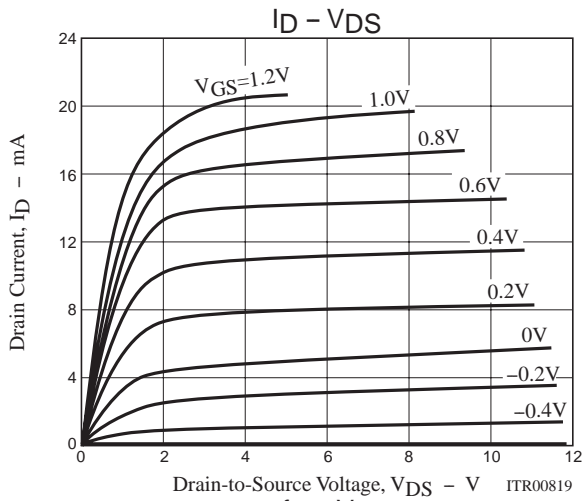
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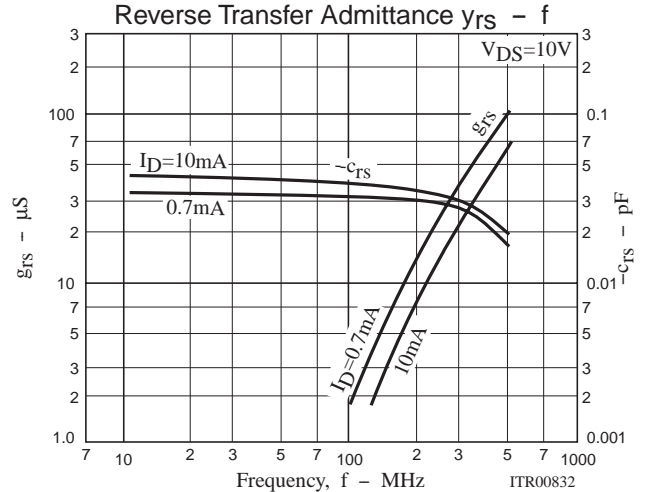
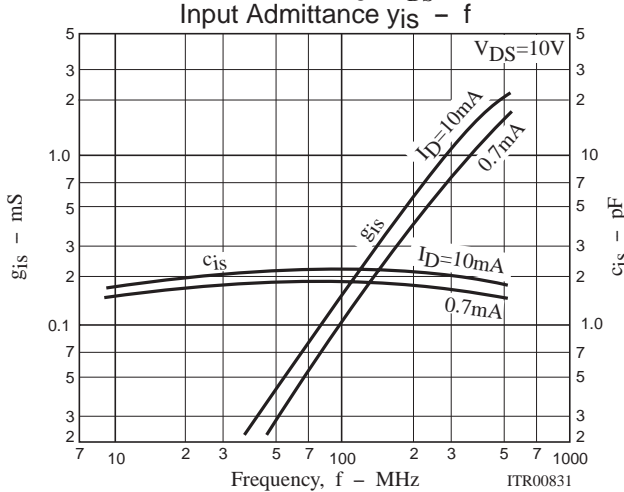
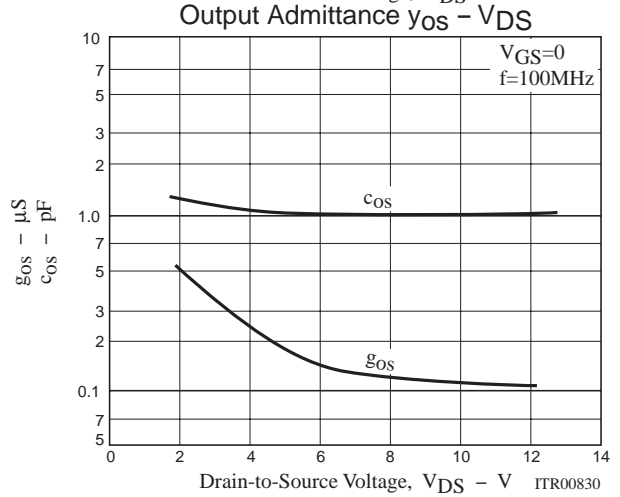
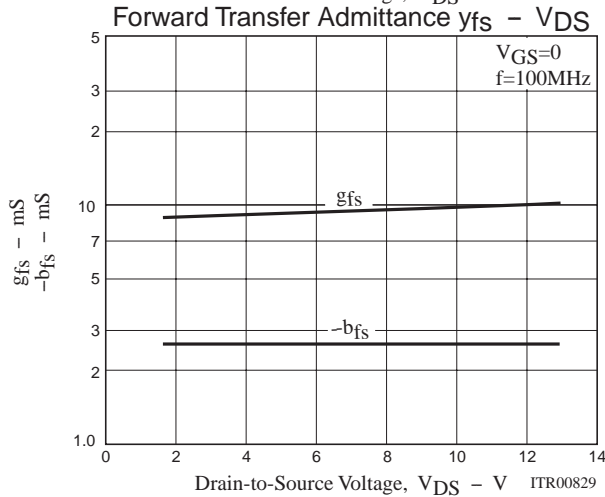
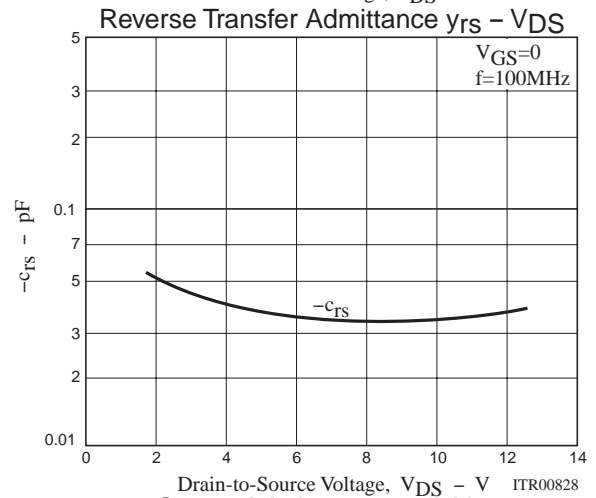
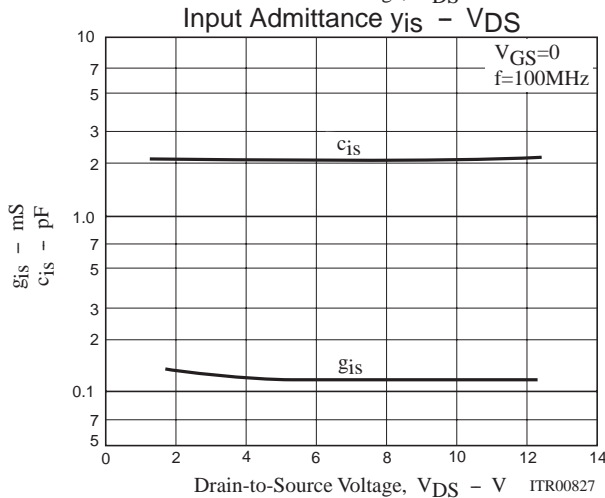
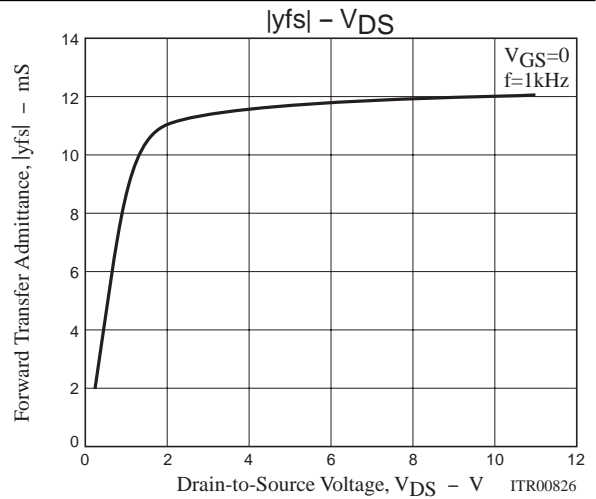
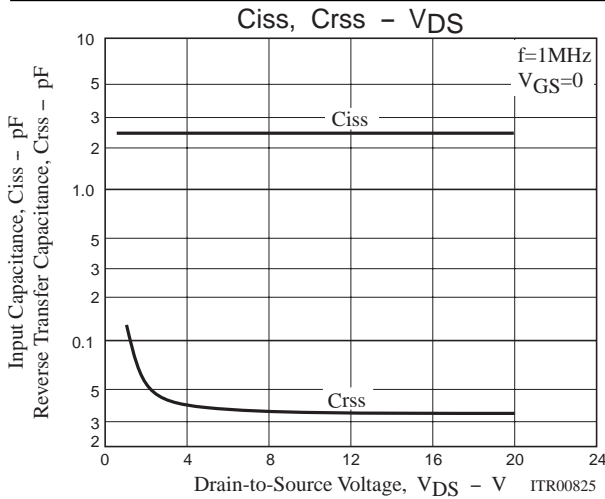
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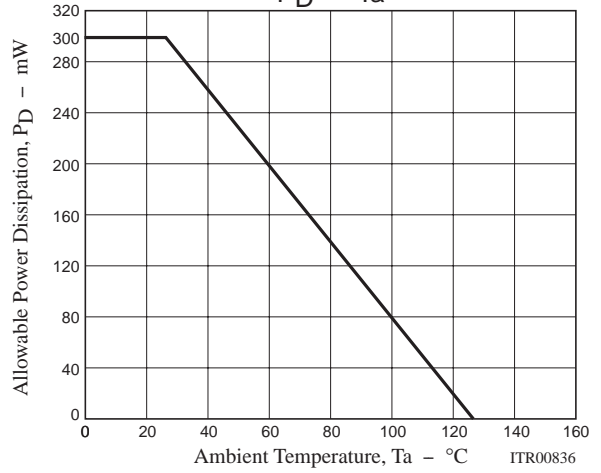
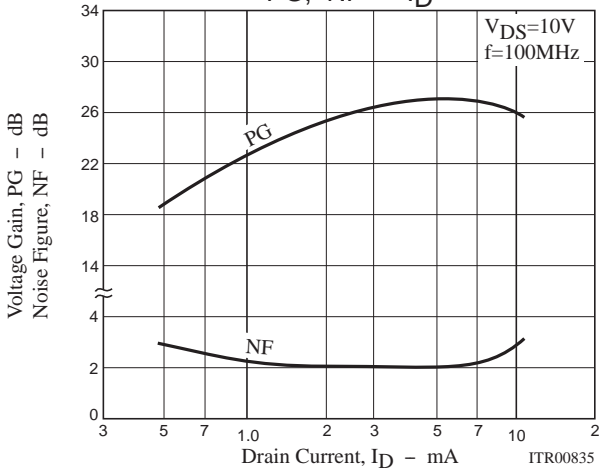
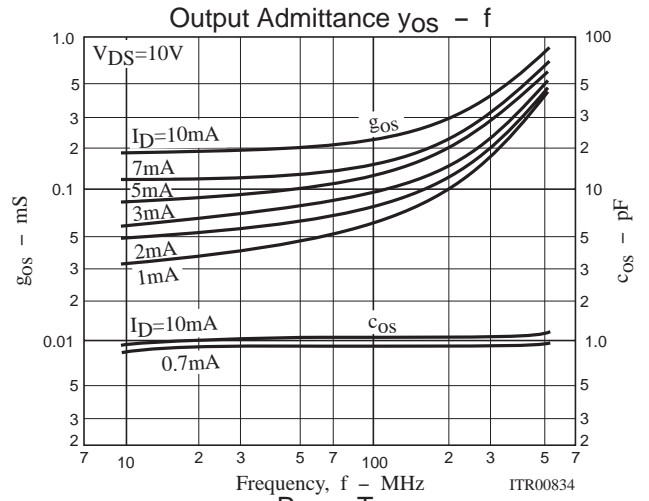
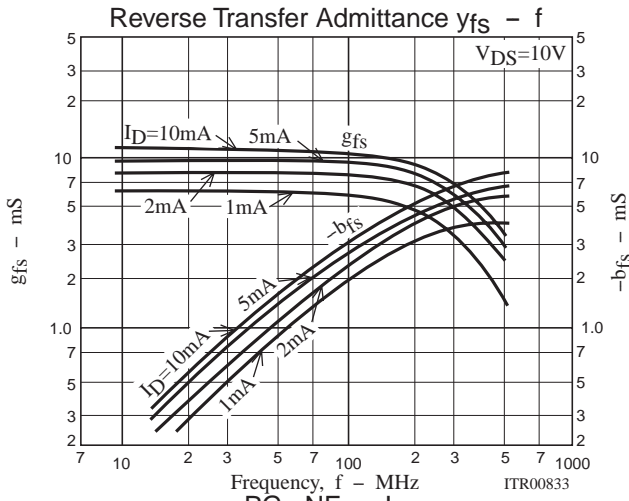
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, V_{GS}=0, f=1kHz$		11		mS
Input Capacitance	$C_{iss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$		2.4		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$		0.035		pF
Power Gain	PG	$V_{DS}=10V, V_{GS}=0, f=100MHz$		27		dB
Noise Figure	NF	See specified Test Circuit.		1.8	3.0	dB

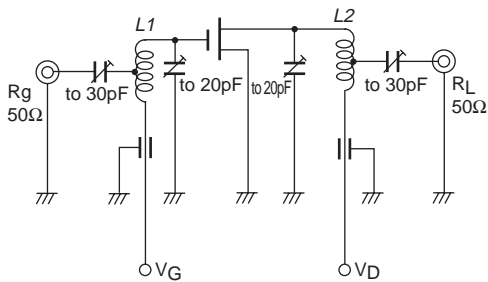


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**PG, NF Specified Test Circuit**



Unit(capacitance : F)  
 L1 : 1.0mmφ plated wire 10mmφ 6T, tap : 3T from H side  
 L2 : 1.0mmφ plated wire 10mmφ 7T, tap : 4T from H side

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