



2SK544

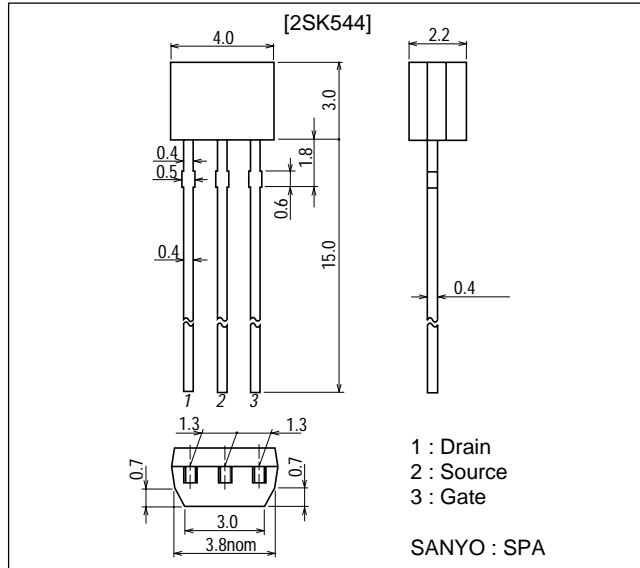
FM Tuner, VHF Amplifier Applications

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_{DS}=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 _{DS}		20	V
Gate-to-Source Voltage	V _{GS}		±5	V
Drain Current	I _D		30	mA
Allowable Power Dissipation	P _D		300	mW
Channel Temperature	T _{ch}		125	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Voltage	V _{DSX}	V _{GS} = -4V, I _D = 100μA	20			V
Gate-to-Source Leakage Current	I _{GS}	V _{DS} = 0, V _{GS} = ±5V			10	nA
Zero-Gate Voltage Drain Current	I _{DSS} *	V _{DS} = 10V, V _{GS} = 0	1.2*		12*	mA
Cutoff Voltage	V _{GS(off)}	V _{DS} = 10V, I _D = 100μA			-2.5	V

* : The 2SK544 is classified by I_{DSS} as follows (unit : mA) :

Rank	D	E	F
I _{DSS}	1.2 to 3.0	2.5 to 6.0	5.0 to 12

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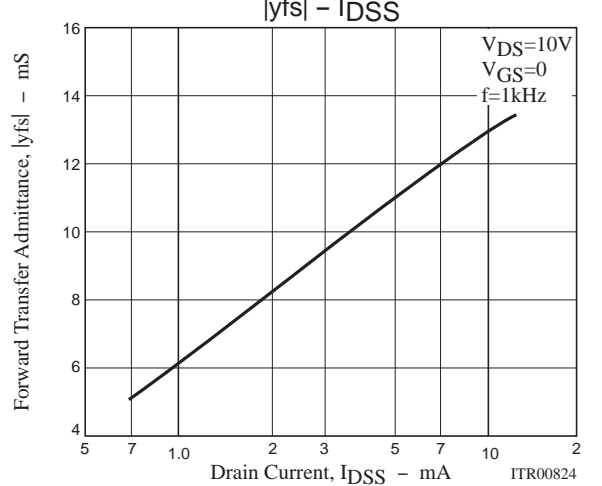
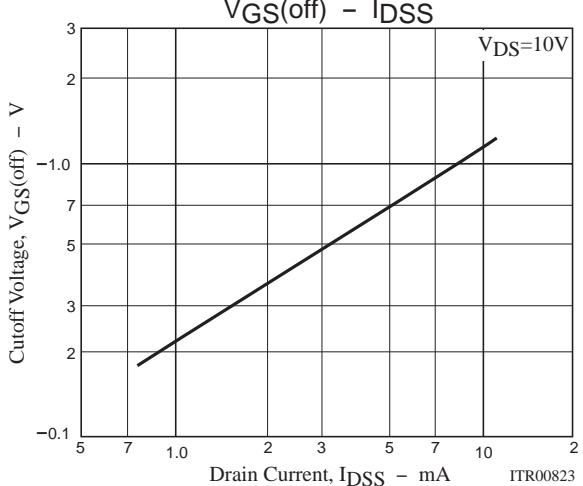
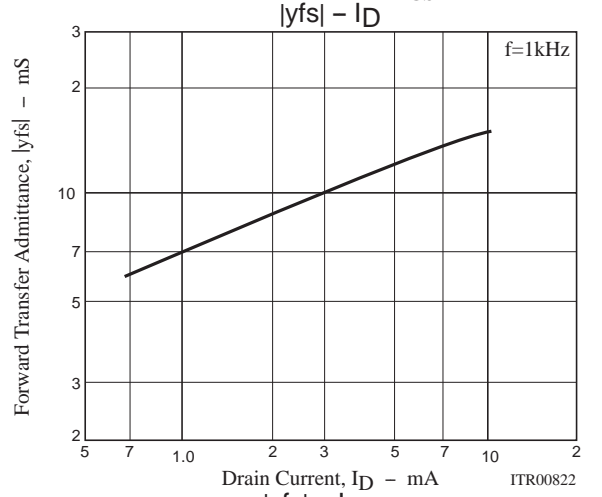
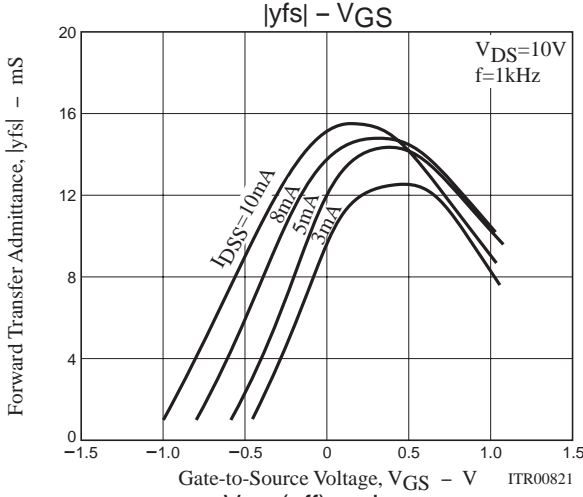
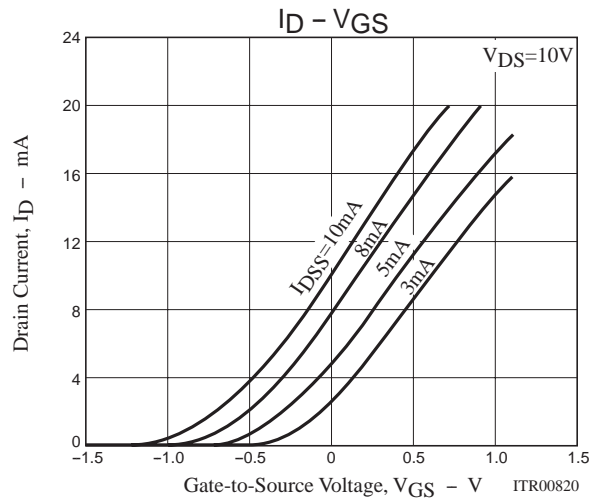
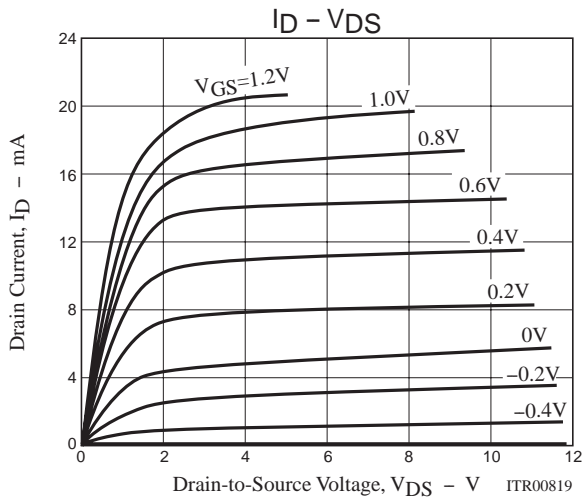
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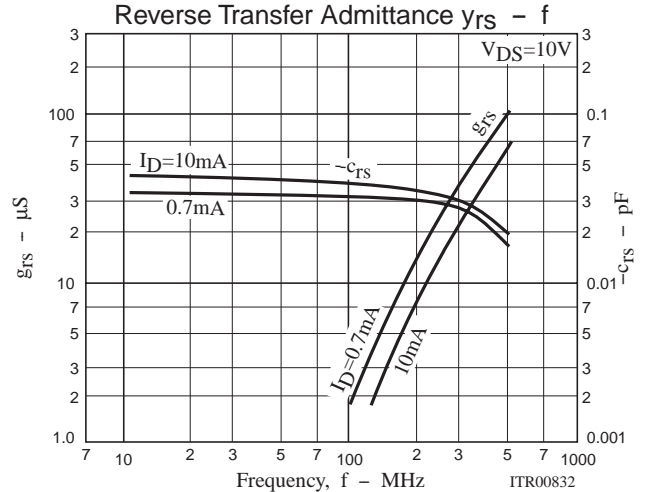
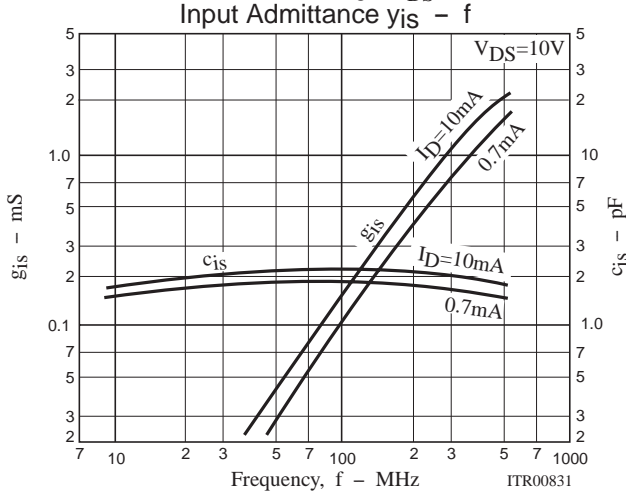
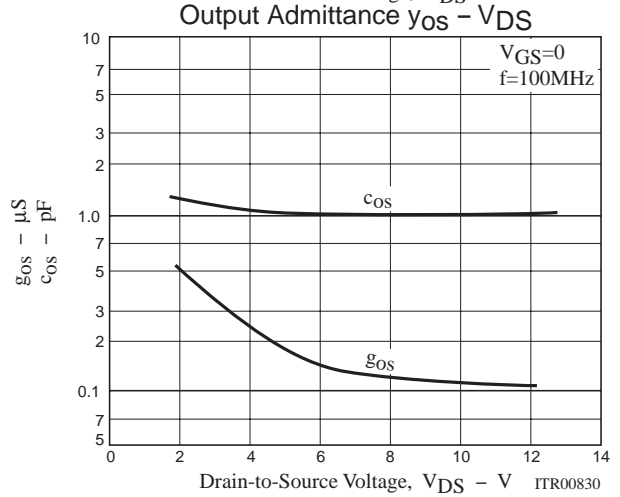
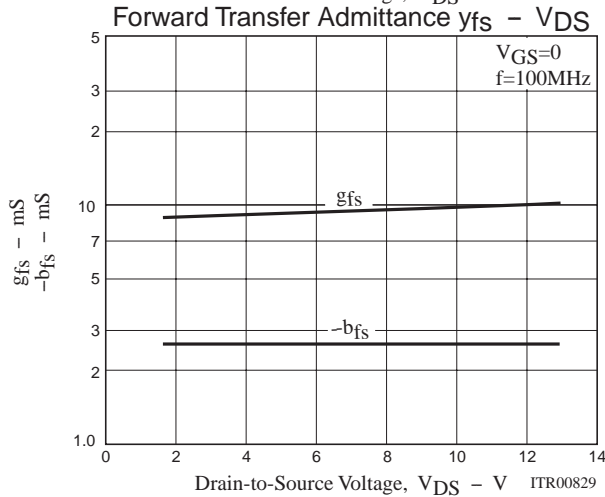
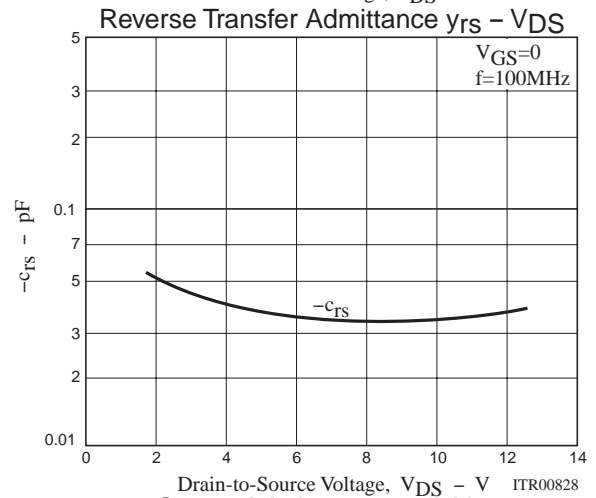
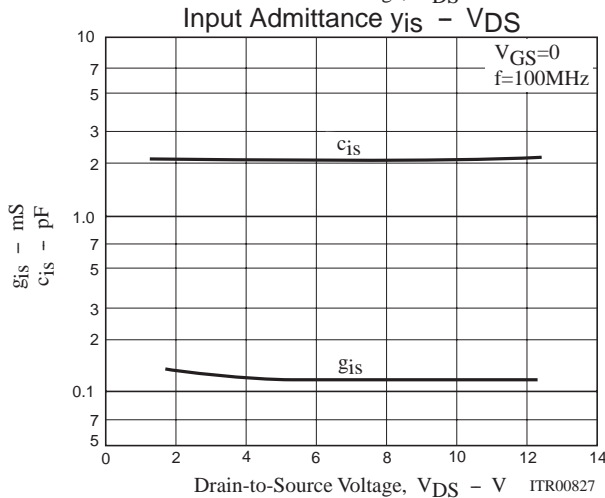
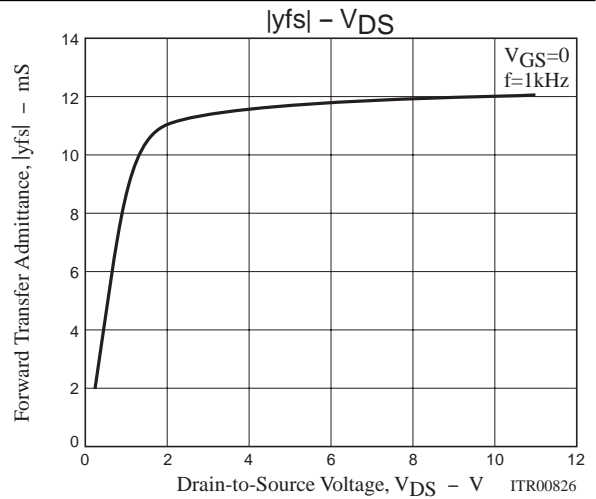
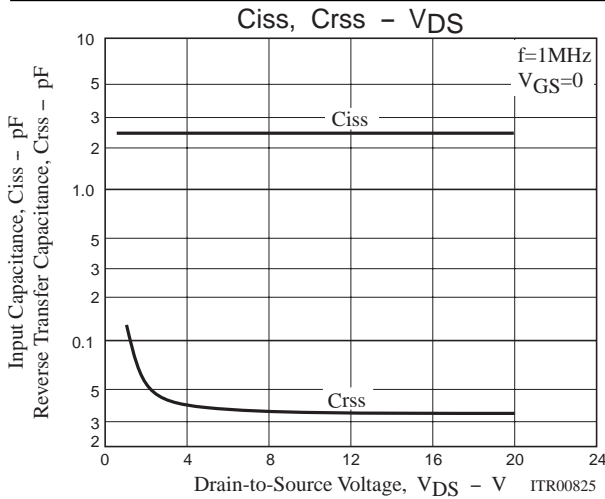
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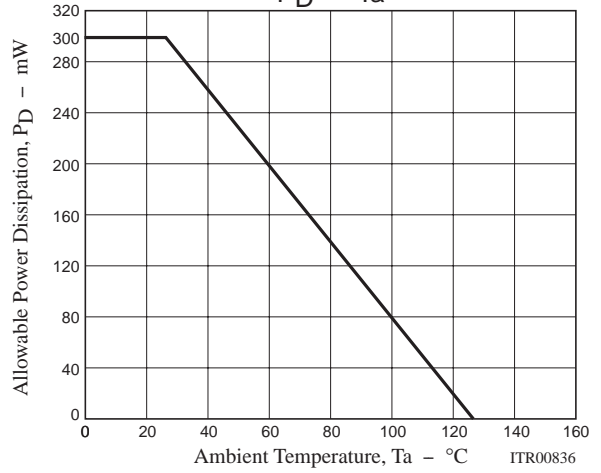
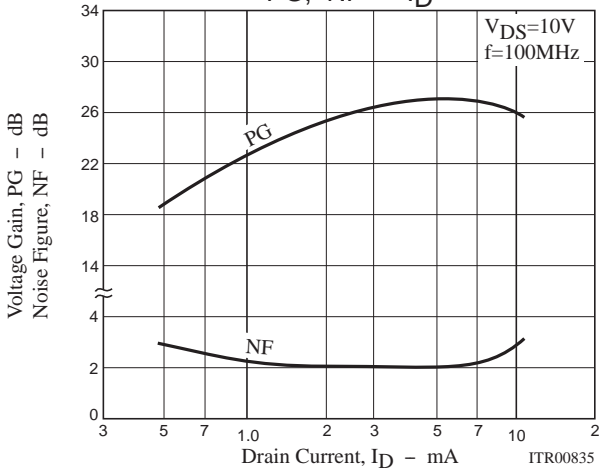
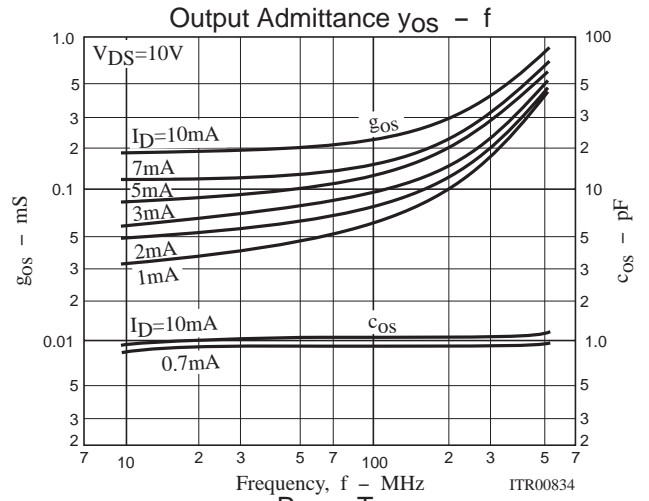
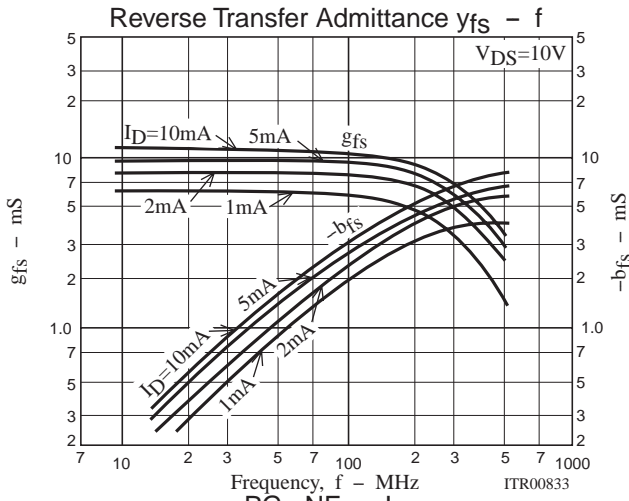
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, V_{GS}=0, f=1kHz$		11		mS
Input Capacitance	C_{iss}	$V_{DS}=10V, V_{GS}=0, f=1MHz$		2.4		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=10V, V_{GS}=0, f=1MHz$		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

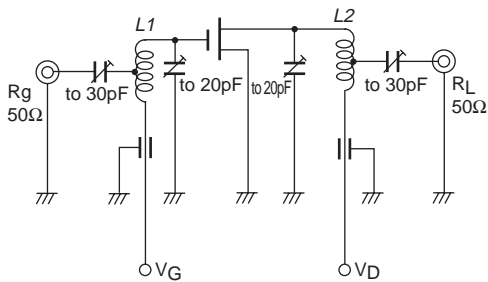


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PG, NF Specified Test Circuit



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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