



# SANYO Semiconductors

## DATA SHEET

# 2SK544

N-Channel Silicon MOSFET

## 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).

### 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 +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	Crss	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, f=1MHz		0.035		pF
Power Gain	PG	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, f=100MHz, See Specified Test Circuit.		27		dB
Noise Figure	NF	V <sub>DS</sub> =10V, V <sub>GS</sub> =0V, f=100MHz, See Specified Test Circuit.		1.8	3.0	dB

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

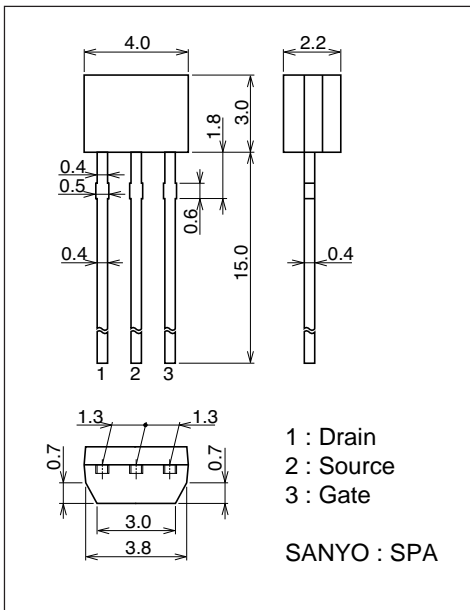
Rank	D	E	F
I <sub>DSS</sub>	1.2 to 3.0	2.5 to 6.0	5.0 to 12

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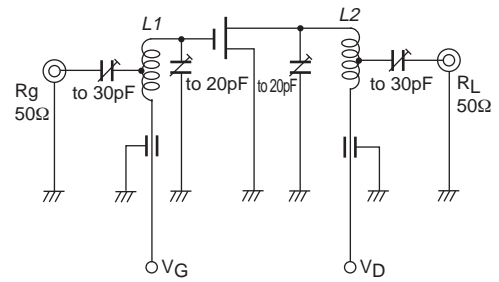
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## Package Dimensions

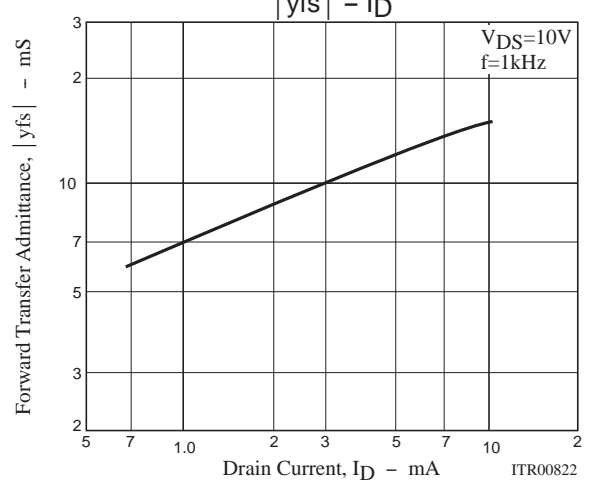
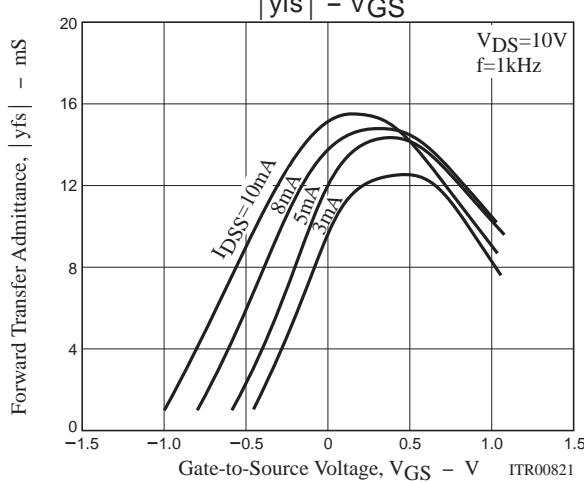
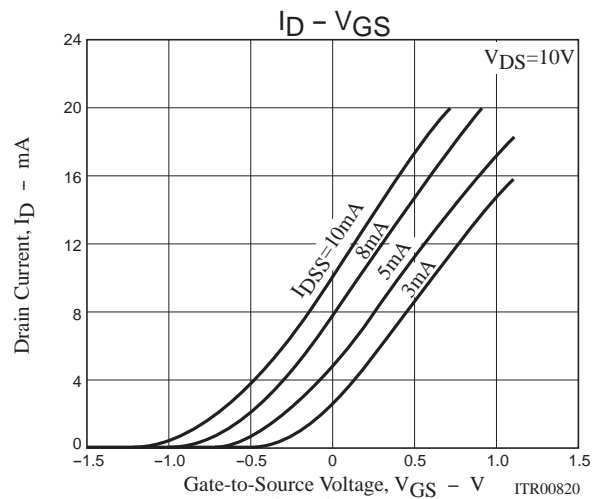
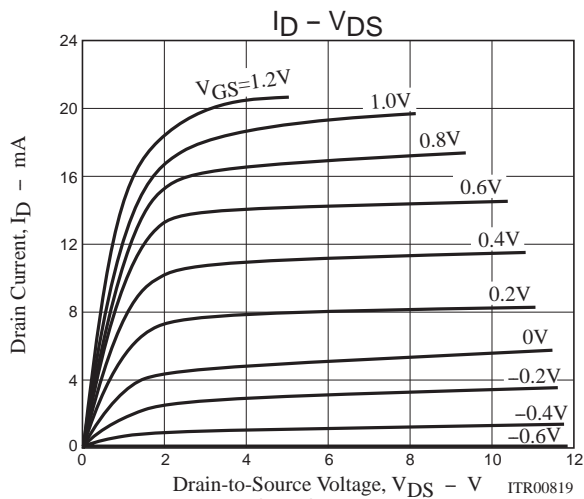
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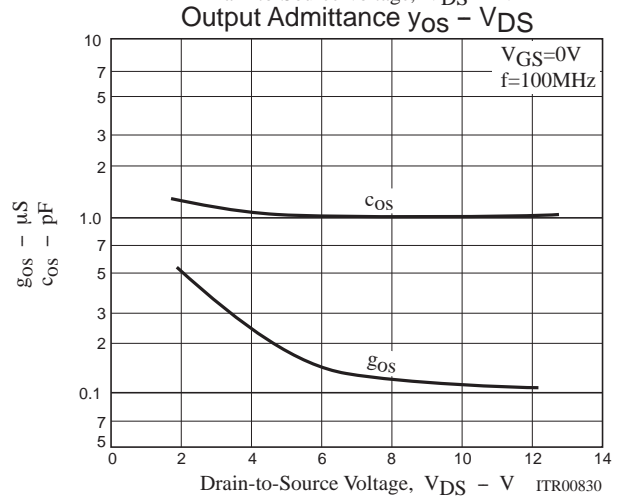
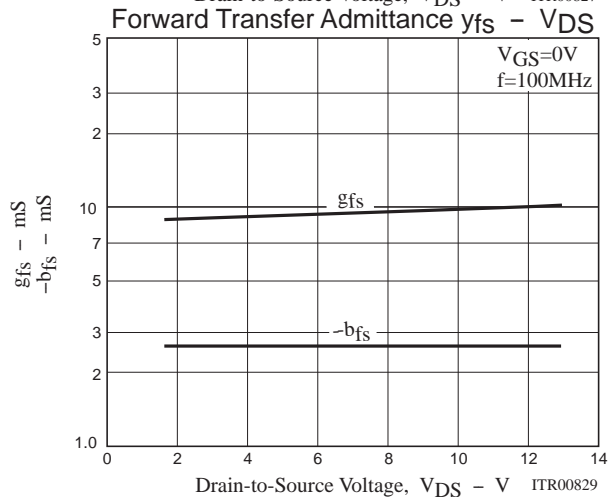
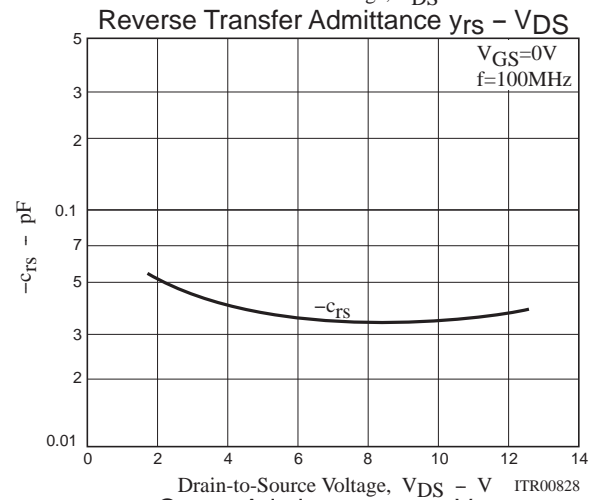
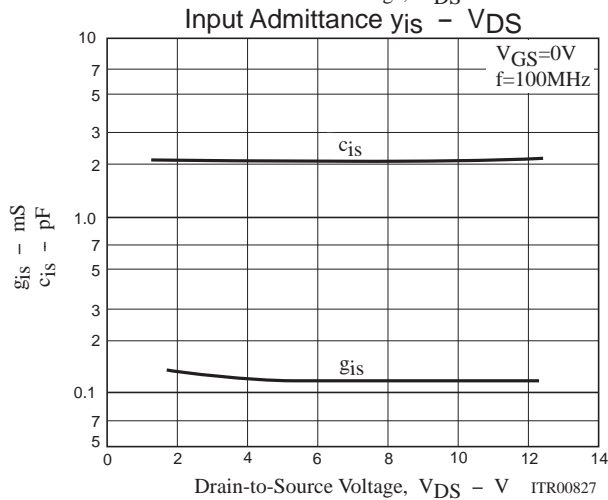
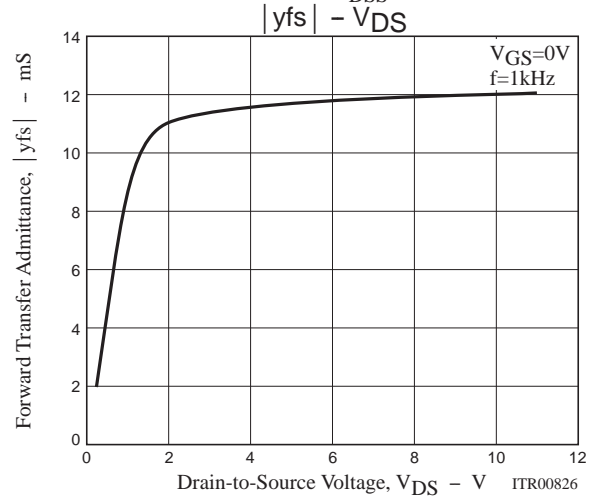
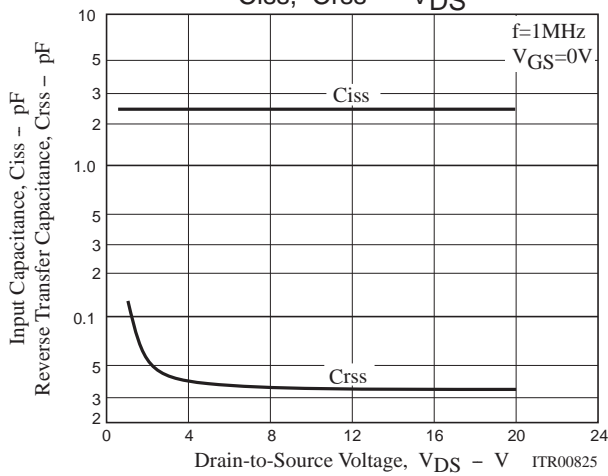
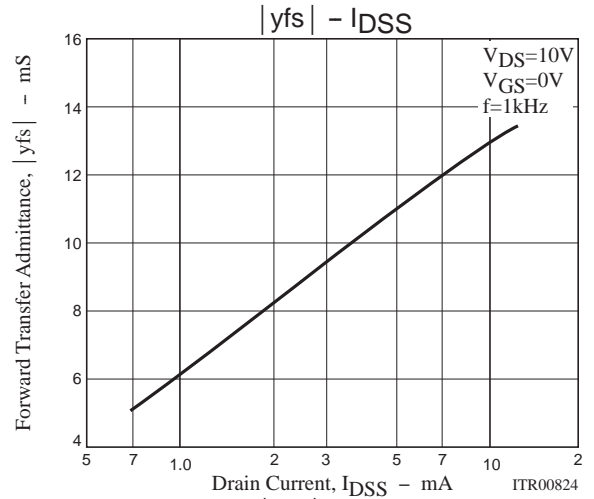
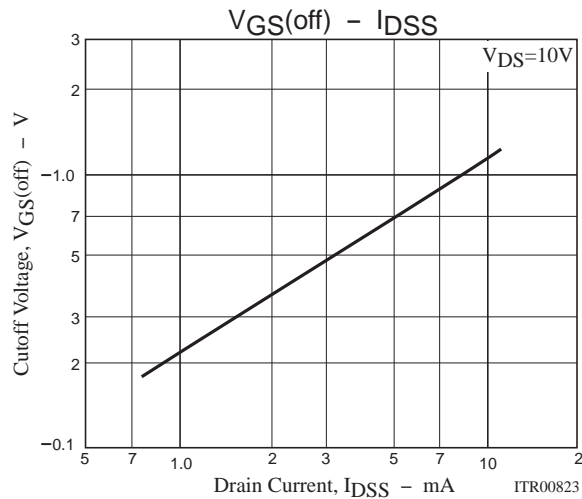


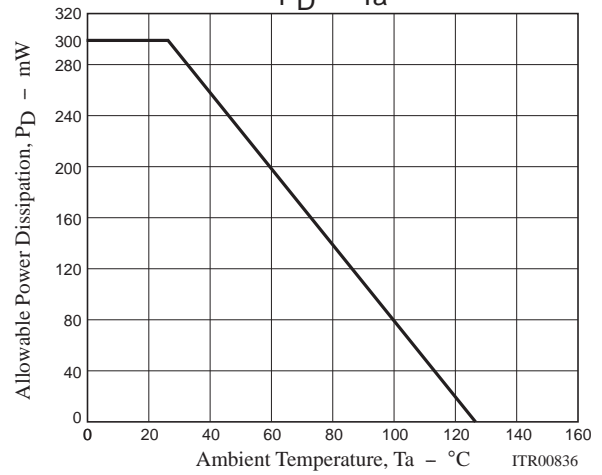
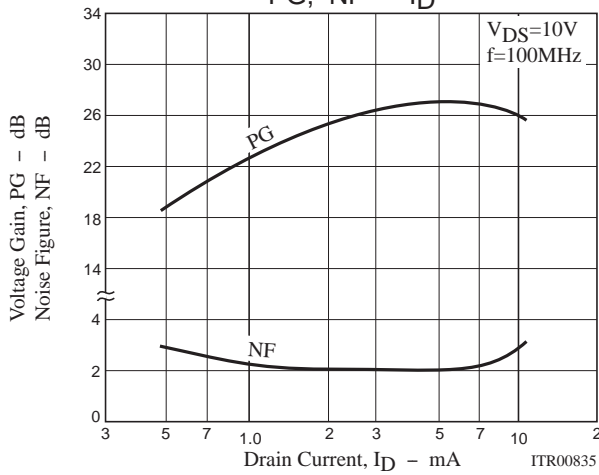
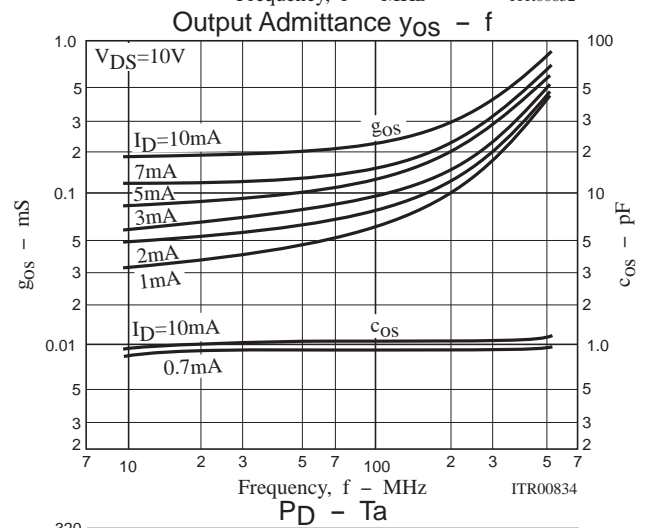
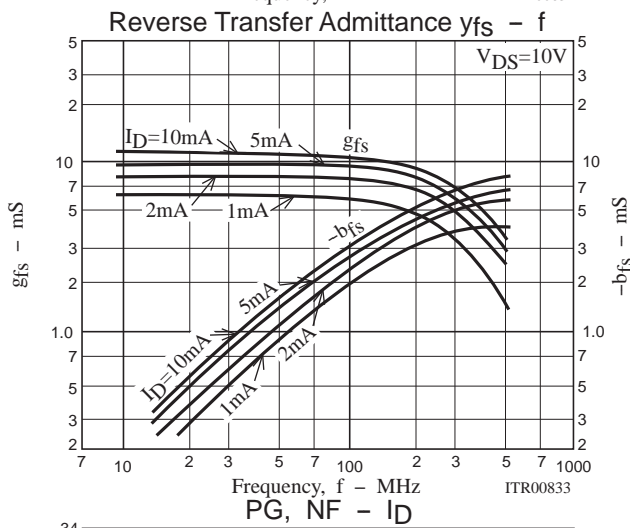
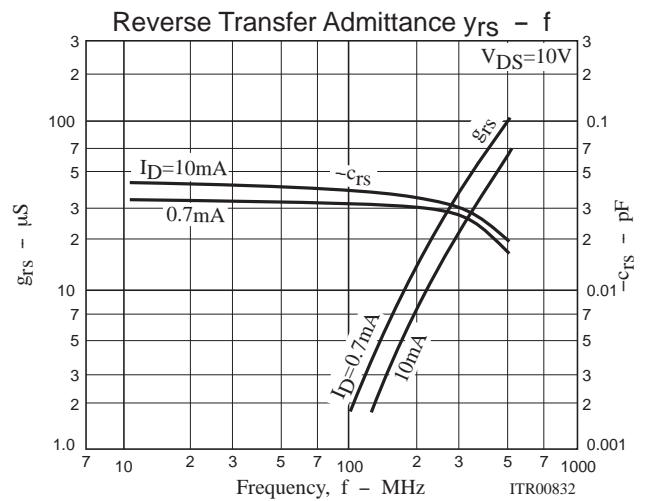
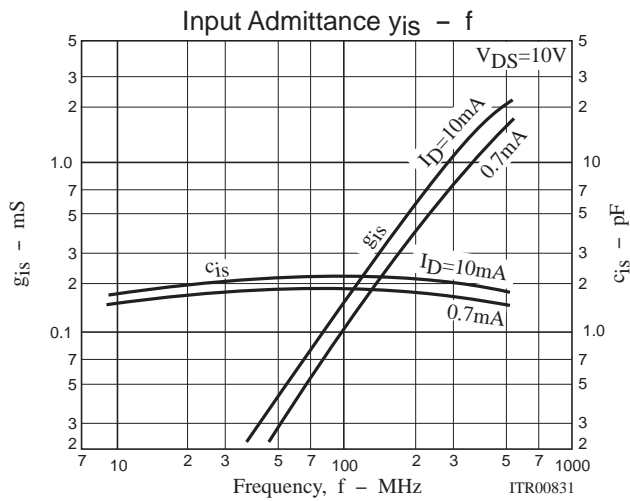
## PG, NF Specified Test Circuit



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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