

**KSK211**Under Development  
**SILICON N-CHANNEL JUNCTION FET****FM TUNER  
VHF AMPLIFIER**

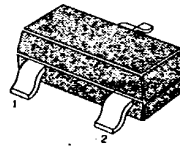
- NF = 2.5 dB (TYP)
- $|Y_{fs}| = 9.0$  mS (TYP)

**ABSOLUTE MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )**

Characteristic	Symbol	Rating	Unit
Gate-Drain Voltage	$V_{GDO}$	-18	V
Gate Current	$I_G$	10	mA
Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55~150	$^\circ\text{C}$

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SOT-23



1. Base 2. Emitter 3. Collector

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**ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ\text{C}$ )**

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Gate Cut-off Current	$I_{GSS}$	$V_{GS} = -0.5\text{V}, V_{DS} = 0$			-10	nA
Gate-Drain Breakdown Voltage	$V(BR)_{GDO}$	$I_G = -100\mu\text{A}$ , Drain	-18			V
Drain Current	$I_{DSS}$	$V_{DS} = 10\text{V}, V_{GS} = 0$	1.0		10	mA
Gate-Source Cut-off Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}, I_D = 1\mu\text{A}$	0.4		4.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10\text{V}, V_{GS} = 0$ , $f = 1\text{kHz}$		9		mS
Reverse Transfer Capacitance	$C_{rss}$	$V_{GS} = 10\text{V}, f = 1\text{MHz}$			0.15	pF
Power Gain	$C_{PS}$	$V_{DS} = 10\text{V}, f = 100\text{MHz}$		18		dB
Noise Figure	NF	$V_{DS} = 10\text{V}, f = 100\text{MHz}$		2.5	3.5	dB

 **$I_{DSS}$  CLASSIFICATION**

Classification	O	Y	G
$I_{DSS}$	1.0-3.0	2.5-6.0	5.0-10

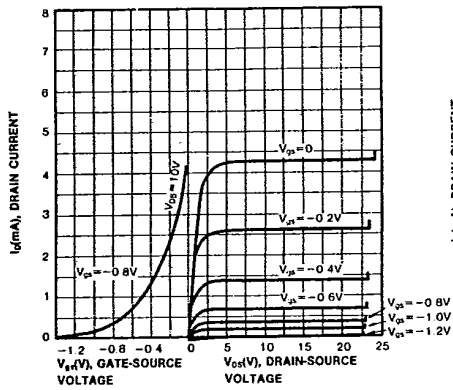


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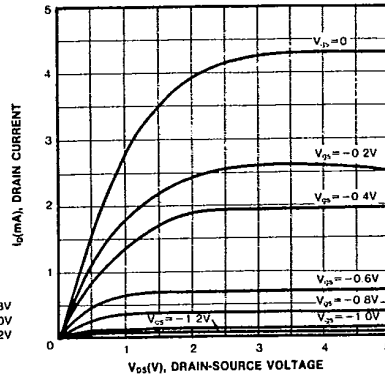
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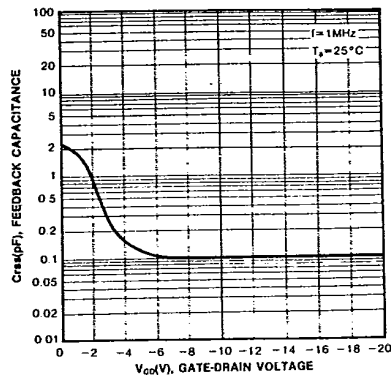
STATIC CHARACTERISTIC



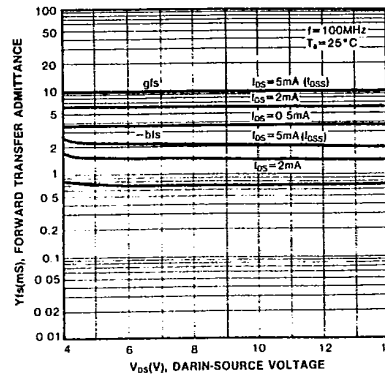
$I_D$ - $V_{DS}$



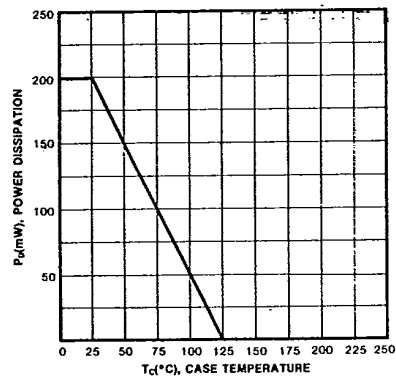
$C_{rss}$ - $V_{DD}$



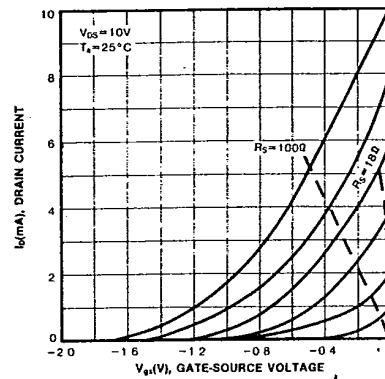
$Y_{fs}$ - $V_{DS}$



POWER DERATING



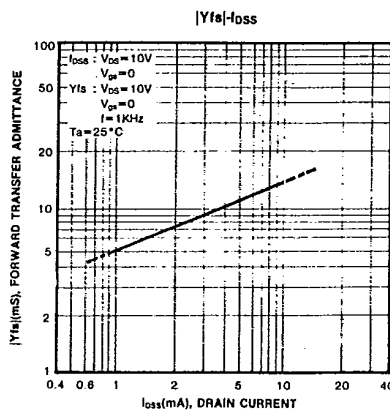
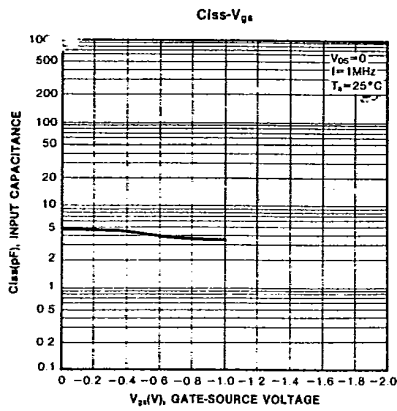
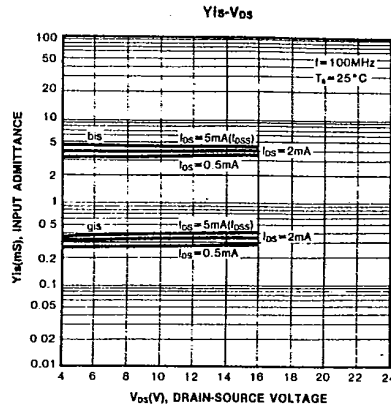
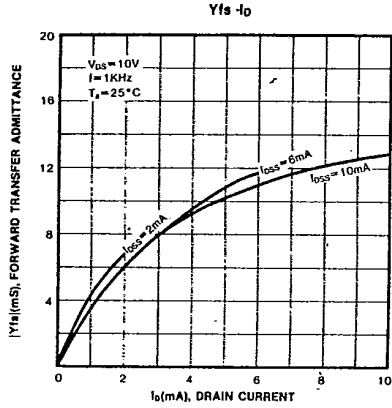
$I_D$ - $V_{GS}$



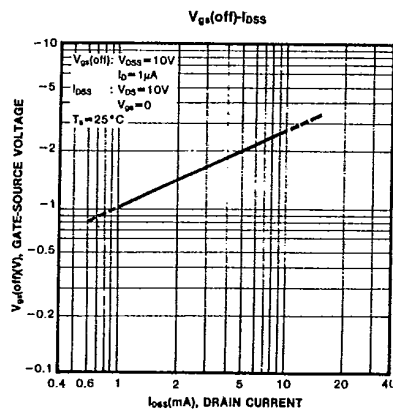
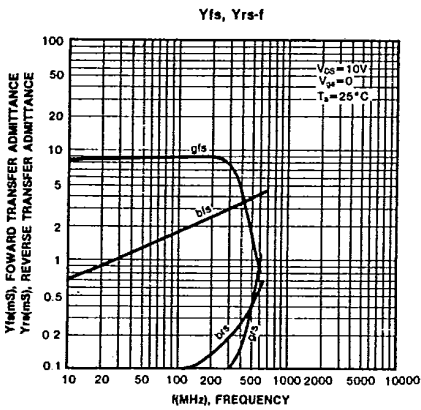
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