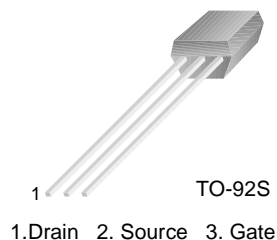


# KSK161

## FM Tuner VHF Amplifier

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



## Silicon N-channel Junction Fet

### Absolute Maximum Ratings $T_a=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Ratings	Units
$V_{GDO}$	Gate-Drain Voltage	-18	V
$I_G$	Gate-Current	10	mA
$P_D$	Power Dissipation	200	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-55 ~ 125	$^\circ\text{C}$

### Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

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

### $I_{DSS}$ Classification

Classification	O	Y	G
$I_{DSS}(\text{mA})$	1.0 ~ 3.0	2.5 ~ 6.0	5.0 ~ 10

# Typical Characteristics

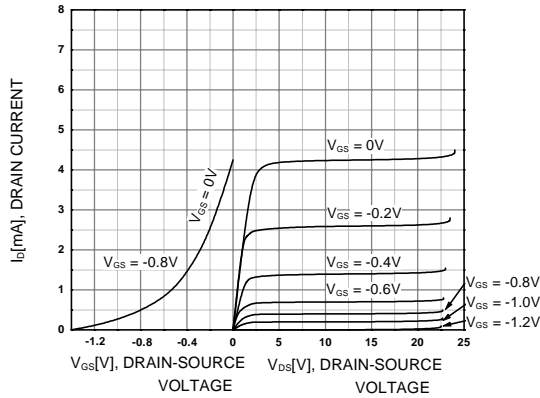


Figure 1. Static Characteristic

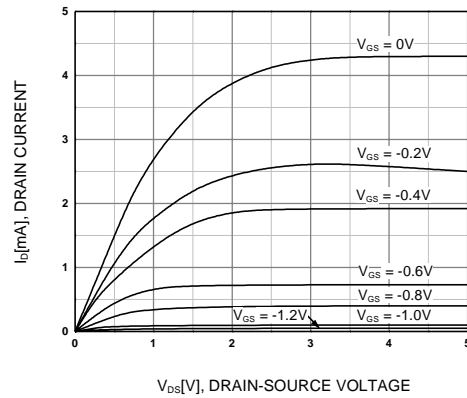


Figure 2.  $I_D$ - $V_{DS}$

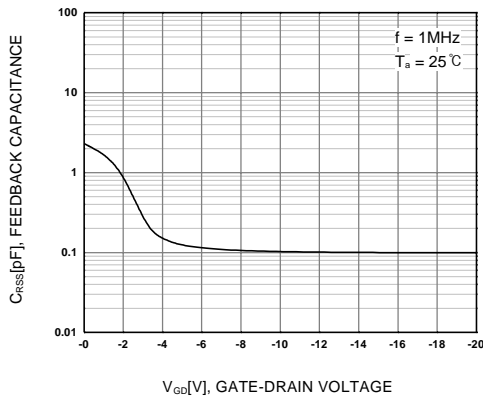


Figure 3.  $C_{rss}$ - $V_{GD}$

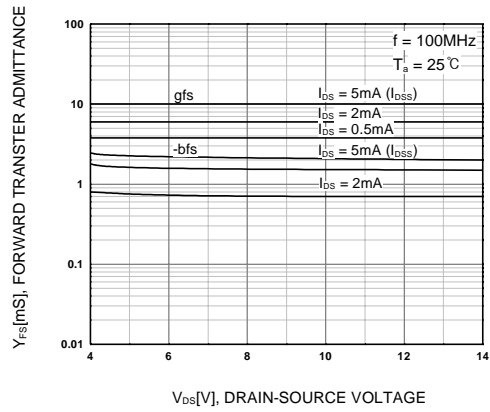


Figure 4.  $Y_{fs}$ - $V_{DS}$

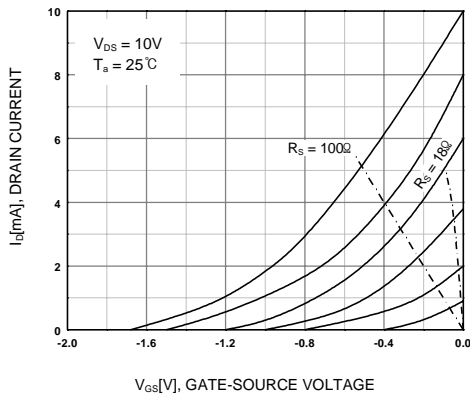


Figure 5.  $I_D$ - $V_{GS}$

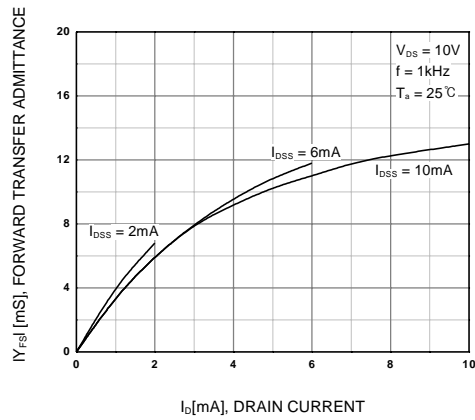


Figure 6.  $|Y_{fs}|$ - $I_D$

Typical Characteristics (Continued)

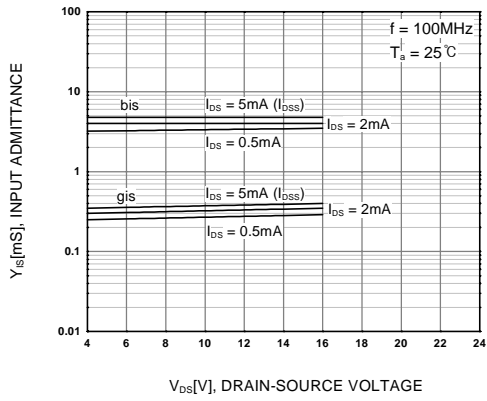


Figure 7.  $Y_{is}$ - $V_{DS}$

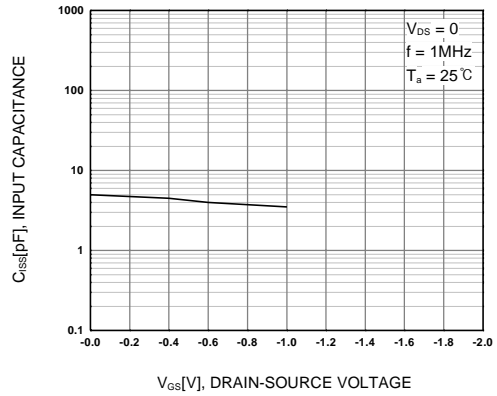


Figure 8.  $C_{iss}$ - $V_{GS}$

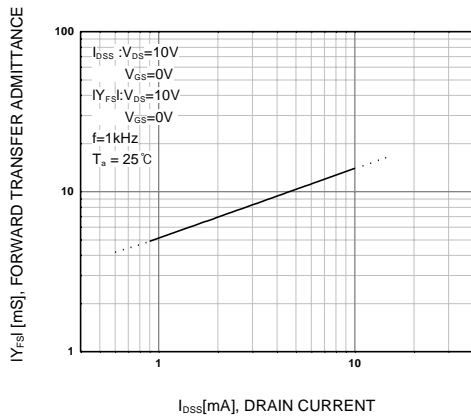


Figure 9.  $|Y_{fs}|$ - $I_{DSS}$

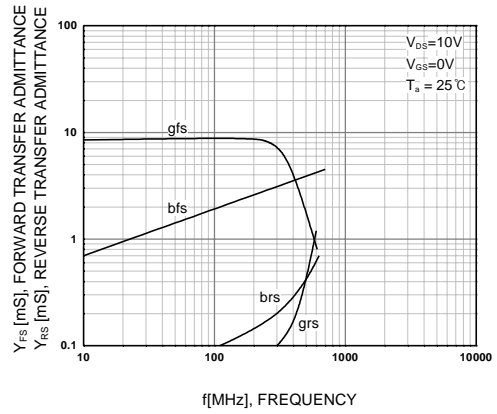


Figure 10.  $Y_{fs}$ ,  $Y_{rs}$ - $f$

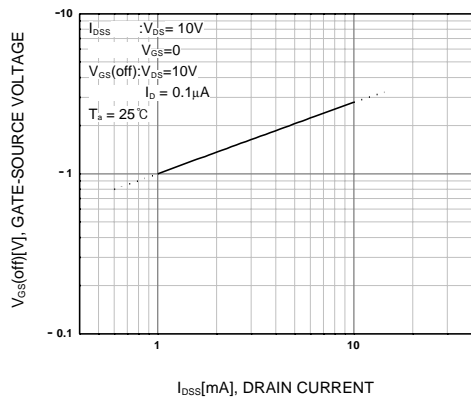


Figure 11.  $V_{GS(off)}$ - $I_{DSS}$

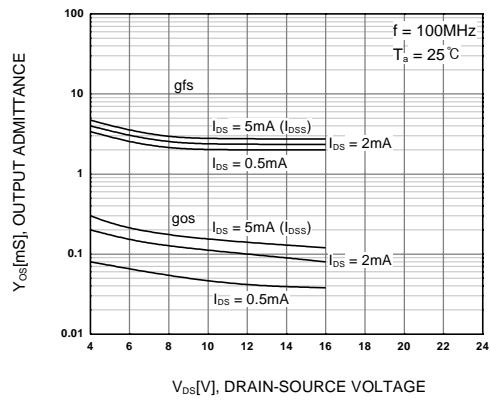


Figure 12.  $Y_{os}$ - $V_{DS}$

Typical Characteristics (Continued)

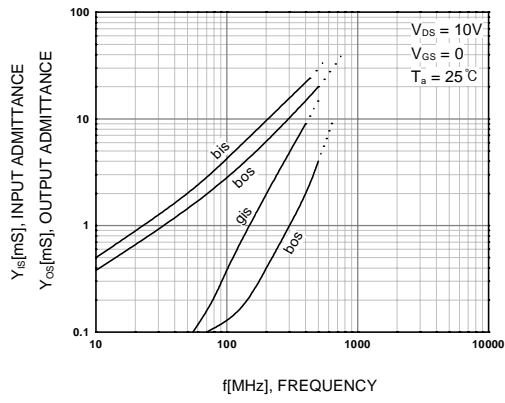


Figure 13.  $Y_{is}$ ,  $Y_{os}$ -f

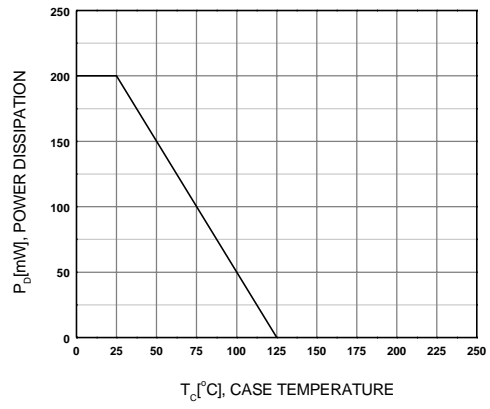
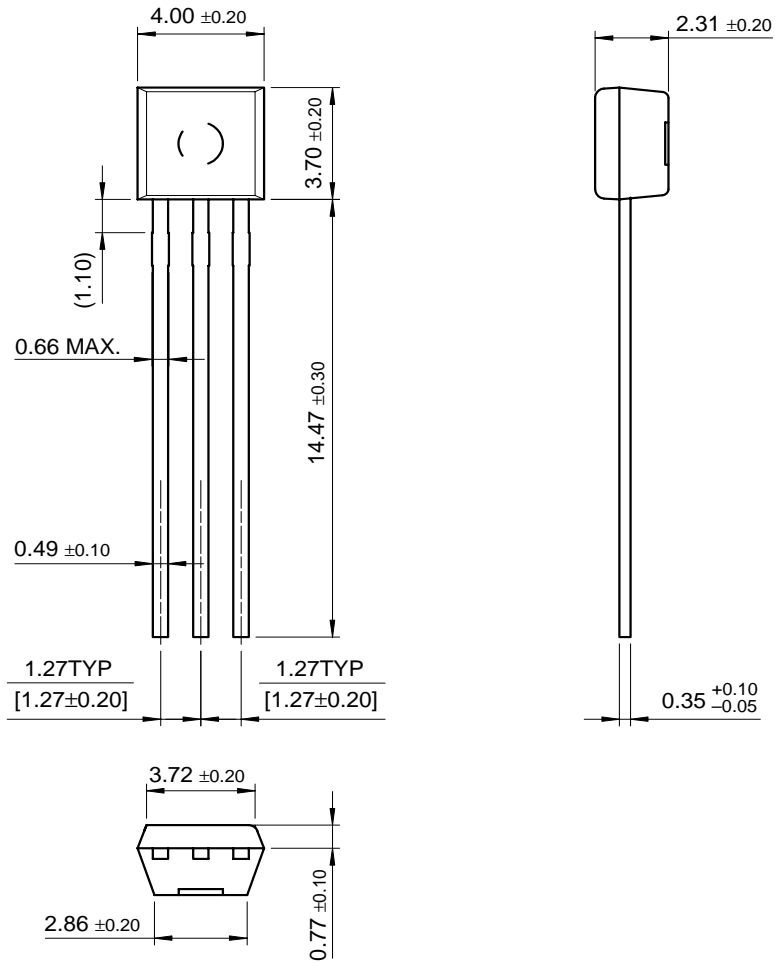


Figure 14. Power Derating

# Package Dimensions

## TO-92S



Dimensions in Millimeters

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**KSK161**  
Silicon N-Channel Junction FET

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- NF =2.5dB (TYP)
  - | Y<sub>FS</sub> | =9.0 mS (TYP)

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Applications

**FM Tuner VHF Amplifier**

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KSK161OTA	Full Production	\$0.074	<a href="#">Purchase</a>	<a href="#">TO-92S</a>	3	TAPE REEL
KSK161GBU	Full Production	\$0.074	<a href="#">Purchase</a>	<a href="#">TO-92S</a>	3	BULK
KSK161OBU	Full Production	\$0.074	<a href="#">Purchase</a>	<a href="#">TO-92S</a>	3	BULK
KSK161YBU	Full Production	\$0.074	<a href="#">Purchase</a>	<a href="#">TO-92S</a>	3	BULK
KSK161YTA	Full Production	\$0.074	<a href="#">Purchase</a>	<a href="#">TO-92S</a>	3	TAPE REEL

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