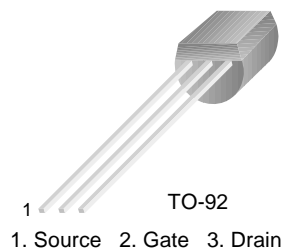


# KSK30

KSK30

## Low Noise PRE-AMP. Use

- High Input Impedance:  $I_{GSS}=1nA$  (MAX)
- Low Noise:  $NF=0.5dB$  (TYP)
- High Voltage:  $V_{GDS}=-50V$



## Silicon N-channel Junction Fet

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

Symbol	Parameter	Ratings	Units
$V_{GDS}$	Gate-Drain Voltage	-50	V
$I_G$	Gate-Current	10	mA
$P_C$	Collector Dissipation	100	mW
$T_J$	Junction Temperature	125	$^{\circ}C$
$T_{STG}$	Storage Temperature	-55 ~ 125	$^{\circ}C$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
$BV_{GDS}$	Gate-Drain Breakdown Voltage	$V_{DS}=0, I_G=-100\mu A$	-50			V
$I_{GSS}$	Gate Leak Current	$V_{GS}=-30V, V_{DS}=0$			-1	nA
$I_{DSS}$	Drain Leak Current	$V_{DS}=10V, V_{GS}=0$	0.3		6.5	mA
$V_{GS} (off)$	Gate-Source Voltage	$V_{DS}=10V, I_D=0.1\mu A$	-0.4		-5	V
$ Y_{FS} $	Forward Transfer Admittance	$V_{DS}=10V, V_{GS}=0, f=1KHz$	1.2			mS
$C_{ISS}$	Input Capacitance	$V_{DS}=0, V_{GS}=0, f=1MHz$		8.2		pF
$C_{RSS}$	Feedback Capacitance	$V_{GD}=10V, V_{DS}=0, f=1MHz$		2.6		pF
NF	Noise Figure	$V_{DS}=15V, V_{GS}=0, R_G=100K\Omega, f=120Hz$		0.5	5	dB

## $I_{DSS}$ Classification

Classification	R	O	Y	G
$I_{DSS}(mA)$	0.30 ~ 0.75	0.60 ~ 1.40	1.20 ~ 3.00	2.60 ~ 6.50

## Typical Characteristics

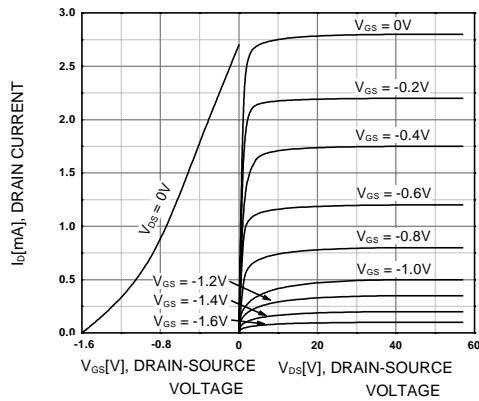


Figure 1. Static Characteristic

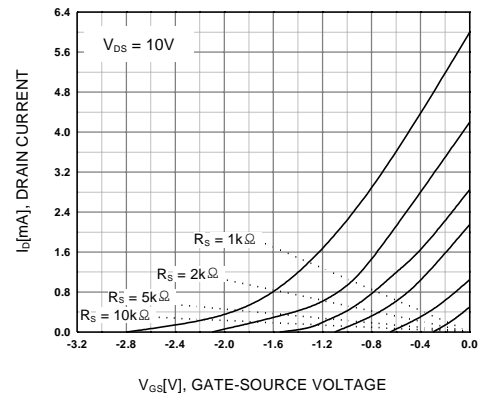


Figure 2.  $I_D$ - $V_{GS}$

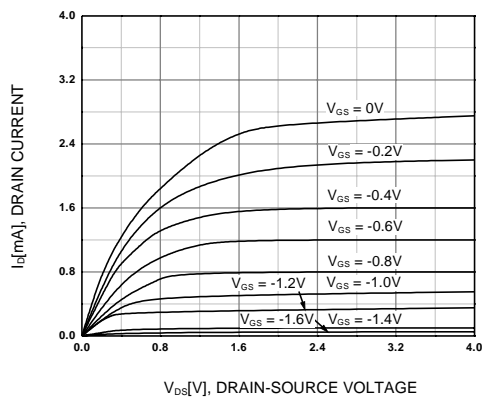


Figure 3.  $I_D$ - $V_{DS}$

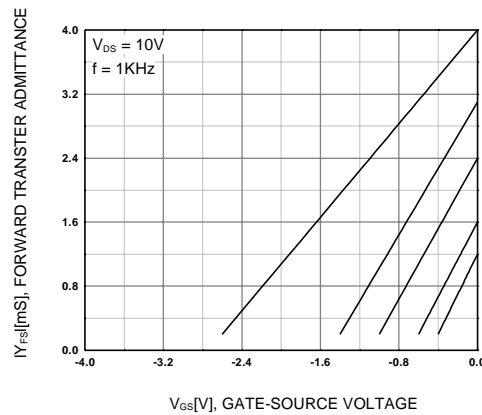


Figure 4.  $|Y_{fs}|$ - $V_{GS}$

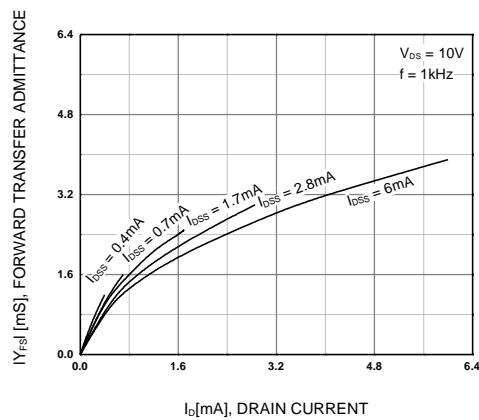


Figure 5.  $|Y_{fs}|$ - $I_D$

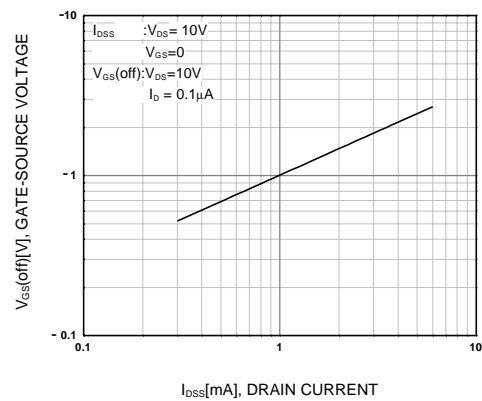


Figure 6.  $V_{GS(off)}$ - $I_{DSS}$

# Typical Characteristics (Continued)

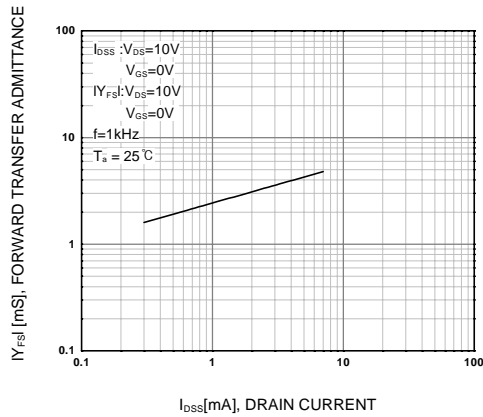


Figure 7.  $|Y_{fs}|$ - $I_{DSS}$

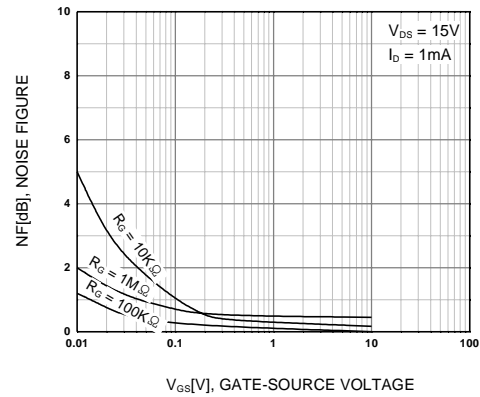


Figure 8. NF-f

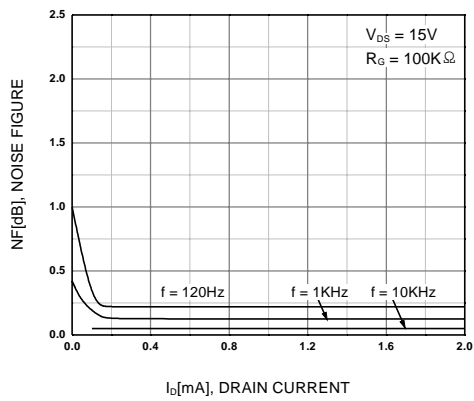


Figure 9. NF- $I_D$

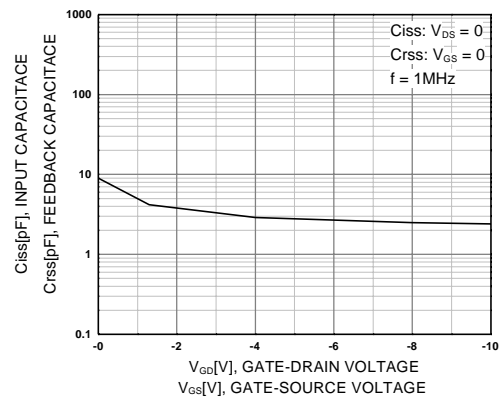


Figure 10.  $C_{iss}$ - $V_{GS}$ ,  $C_{rss}$ - $V_{GD}$

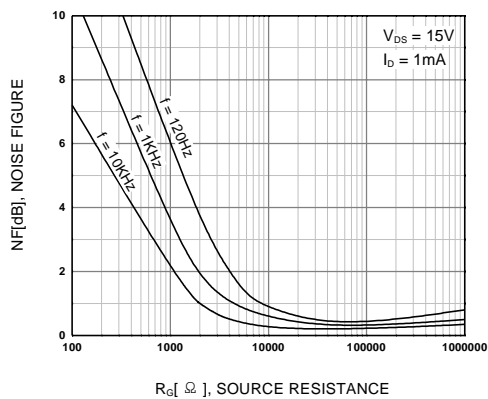


Figure 11. NF- $R_G$

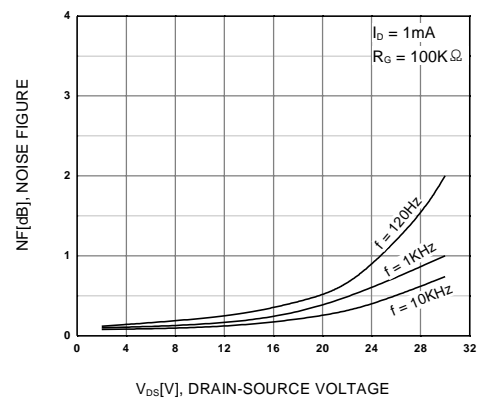


Figure 12. NF- $V_{DS}$

# Typical Characteristics (Continued)

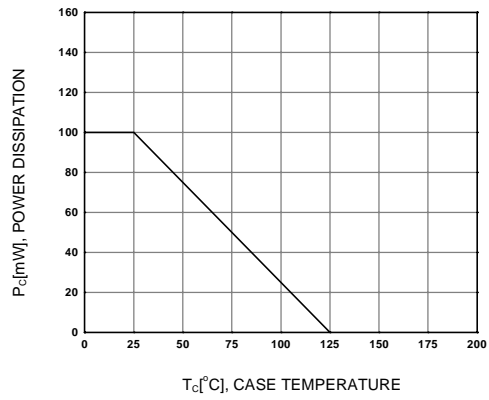
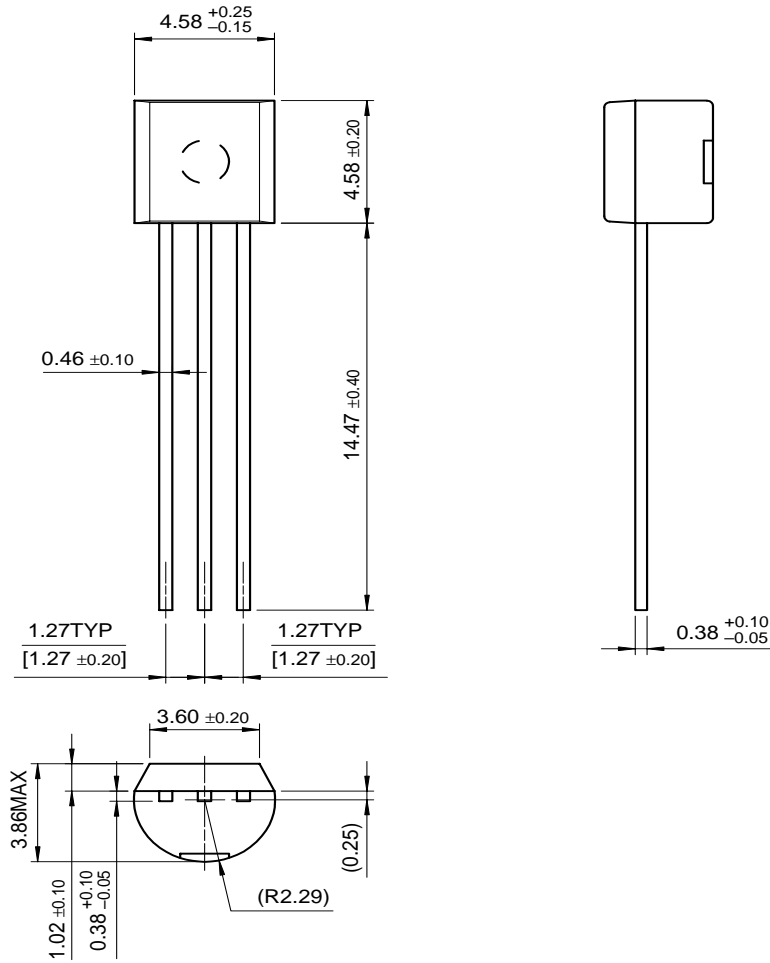


Figure 13. Power Derating

# Package Dimensions

## TO-92



Dimensions in Millimeters

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