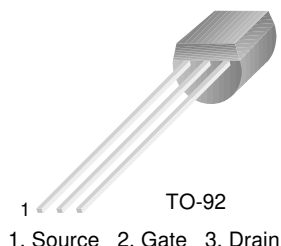


KSK30

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_D	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

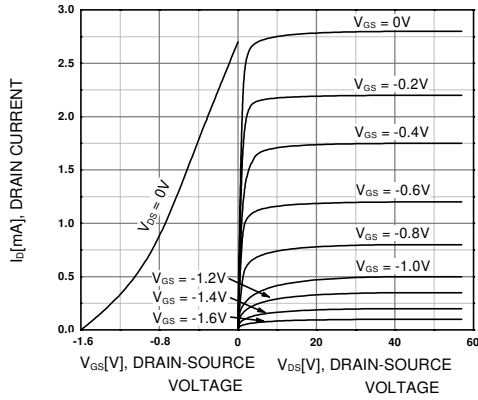


Figure 1. Static Characteristic

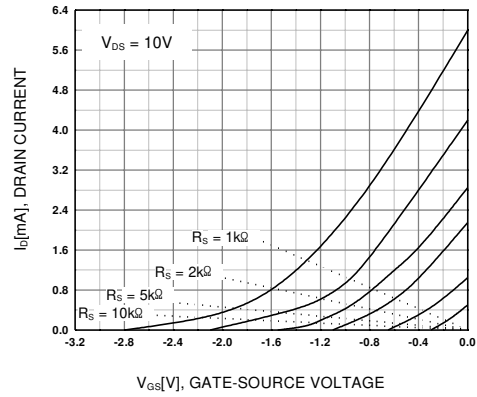


Figure 2. I_D - V_{GS}

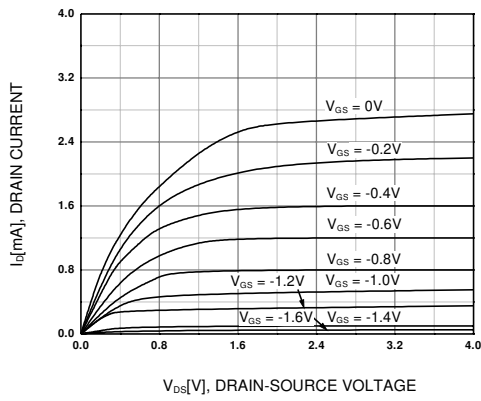


Figure 3. I_D - V_{DS}

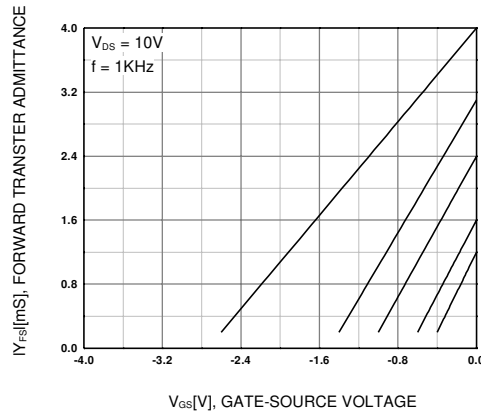


Figure 4. $|Y_{fs}|$ - V_{GS}

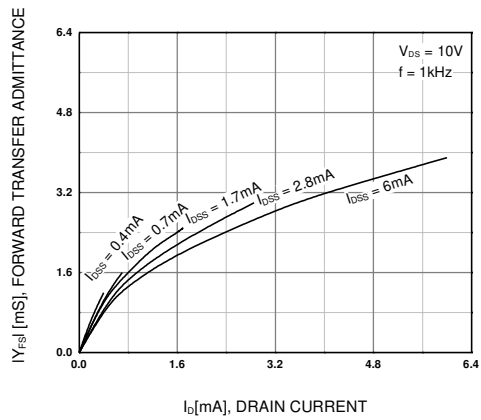


Figure 5. $|Y_{fs}|$ - I_D

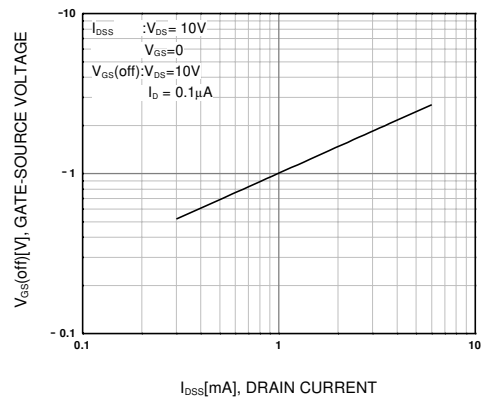


Figure 6. $V_{GS(off)}$ - I_{DSS}

Typical Characteristics (Continued)

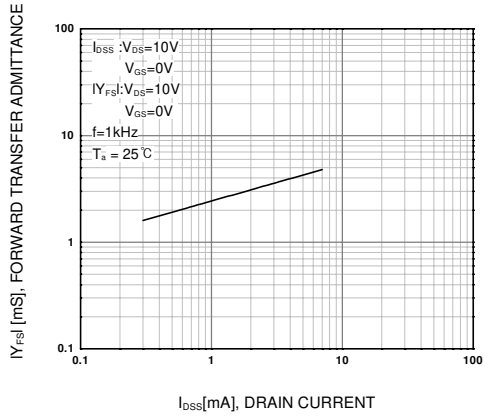


Figure 7. $|Y_{fs}|$ - I_{DSS}

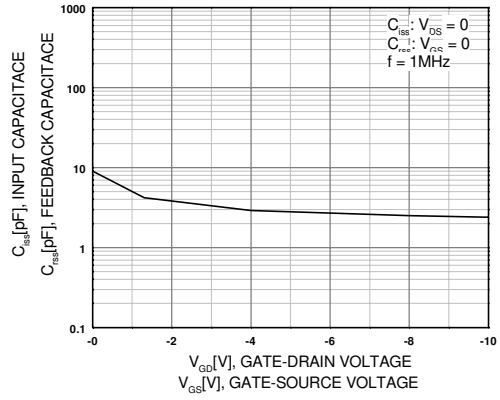


Figure 8. C_{iss} - V_{GS} , C_{rss} - V_{GD}

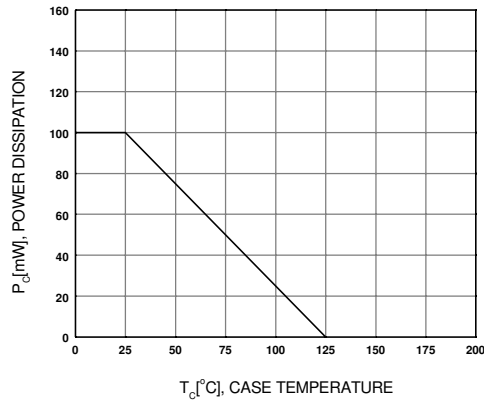
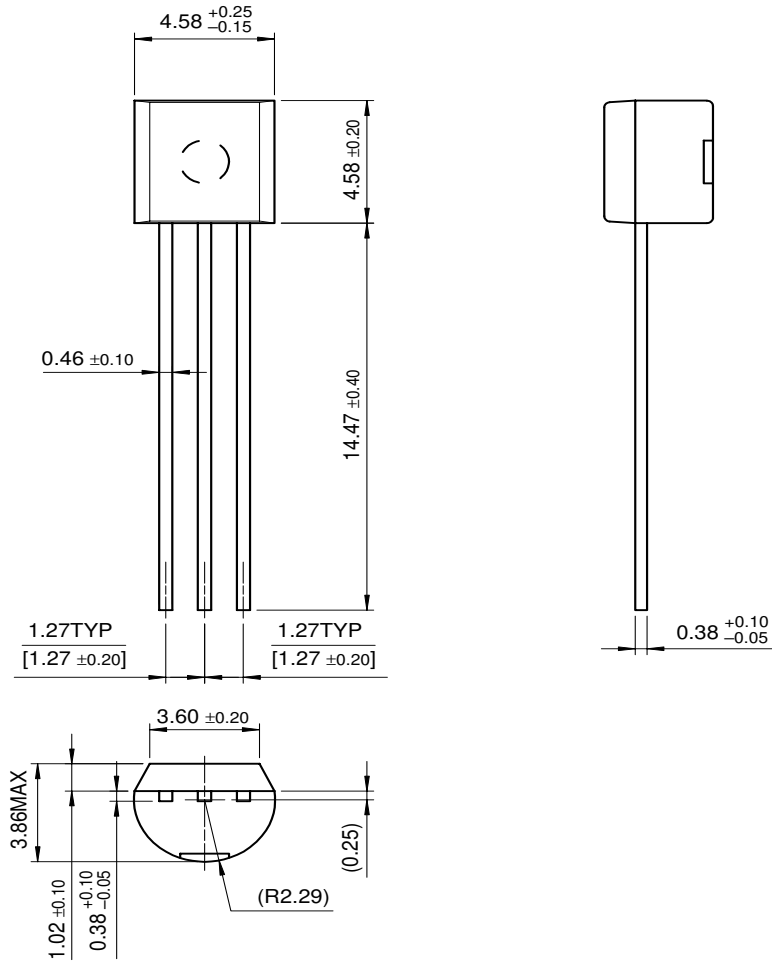


Figure 9. Power Derating

Package Dimensions

KSK30

TO-92



Dimensions in Millimeters

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