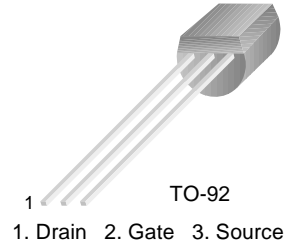


KSK117

Low Requency Low Noise AMP

- High $|Y_{FS}|$: 15mS (TYP)
- High Input Impedance: $I_{GSS} = -1nA$
- Low Noise, NF =1dB (TYP)



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 Power Dissipation	300	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	$V_{DS}=10V, V_{GS}=0$	0.6		14	mA
$V_{GS} (off)$	Gate-Source Voltage	$V_{DS}=10V, I_D=0.1\mu A$	-0.2		-1.5	V
$ Y_{FS} $	Forward Transfer Admittance	$V_{DS}=10V, V_{GS}=0, f=1KHz$	4.0	15		mS
C_{ISS}	Input Capacitance	$V_{DS}=0, V_{GS}=0, f=1MHz$		13		pF
C_{RSS}	Feedback Capacitance	$V_{GD}=10V, V_{DS}=0, f=1MHz$		3		pF
NF1	Noise Figure	$V_{DS}=10V, R_G=1K\Omega, I_D=0.5mA, f=10Hz$		5	10	dB
NF2		$V_{DS}=10V, R_G=1K\Omega, I_D=0.5mA, f=1Hz$		1	2	dB

I_{DSS} Classification

Classification	Y	G	L
$I_{DSS}(mA)$	1.2 ~ 3.0	2.6 ~ 6.5	6.0 ~ 14

Typical Characteristics

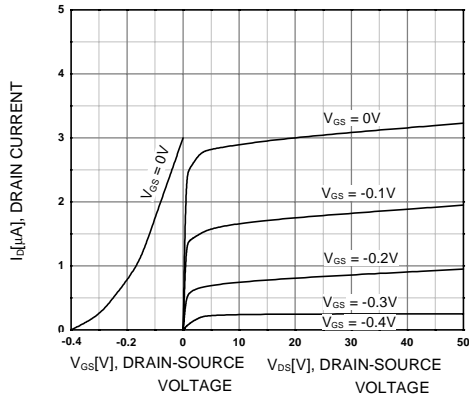


Figure 1. Static Characteristic

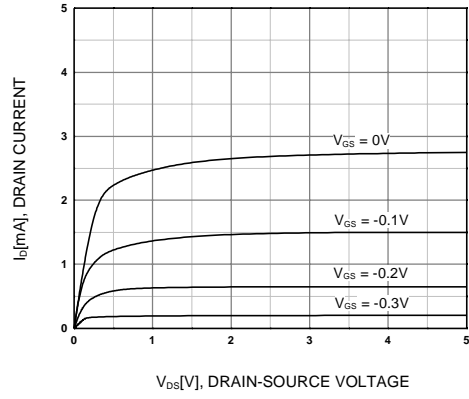


Figure 2. I_D - V_{DS}

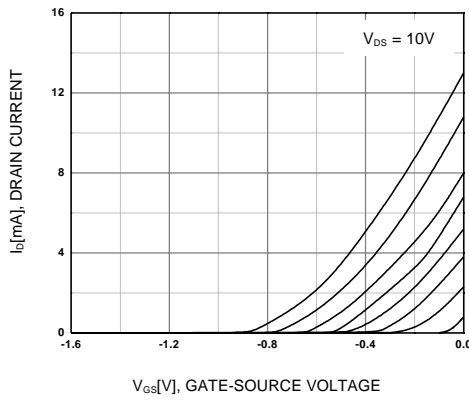


Figure 3. I_D - V_{GS}

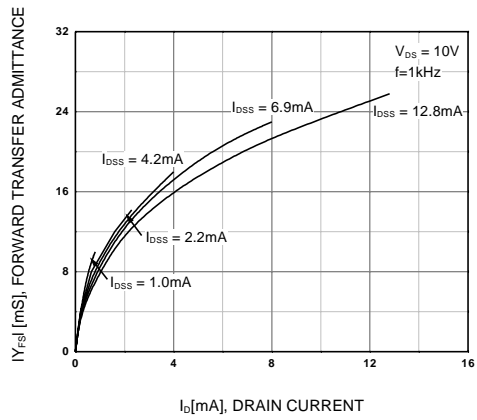


Figure 4. $|Y_{fs}|$ - I_D

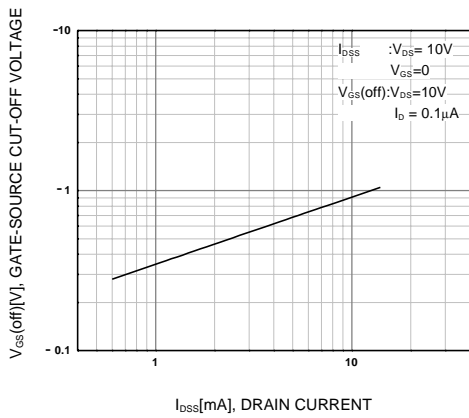


Figure 5. $V_{GS(off)}$ - I_{DSS}

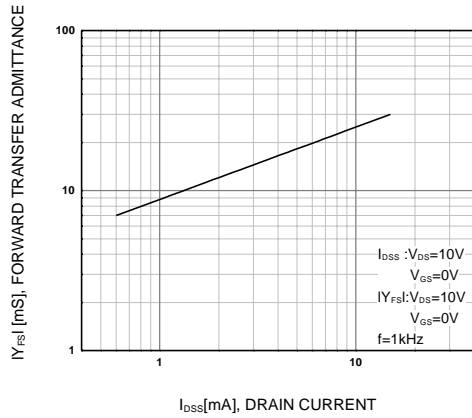


Figure 6. $|Y_{fs}|$ - I_{DSS}

Typical Characteristics (Continued)

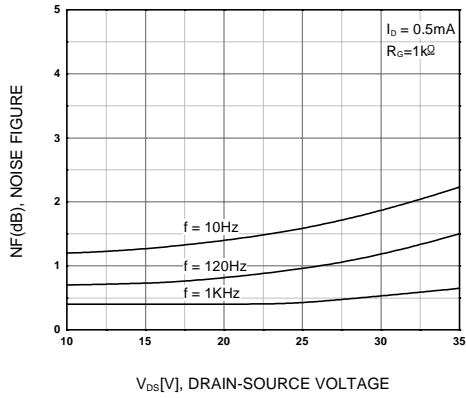


Figure 7. NF- V_{DS}

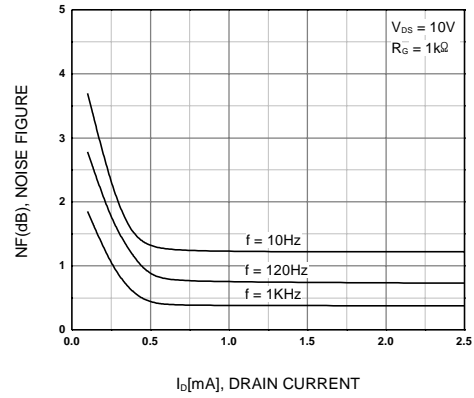


Figure 8. NF- I_D

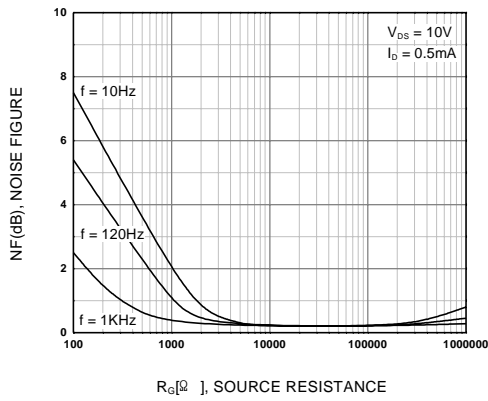


Figure 9. NF- R_G

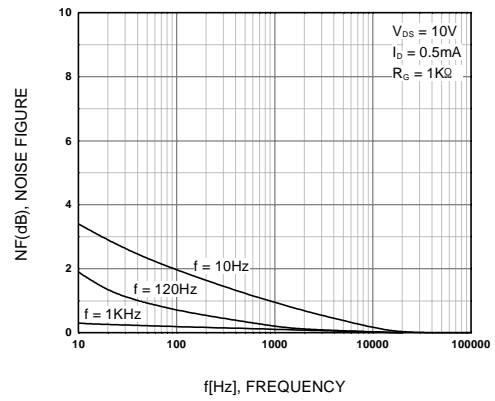


Figure 10. NF-f

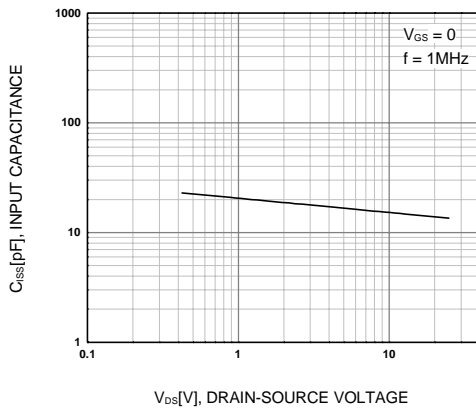


Figure 11. C_{iss} - V_{DS}

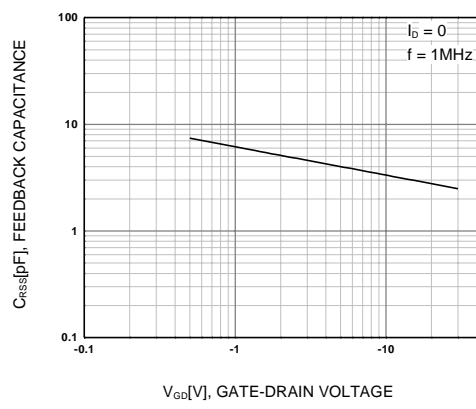


Figure 12. C_{rss} - V_{GD}

Typical Characteristics (Continued)

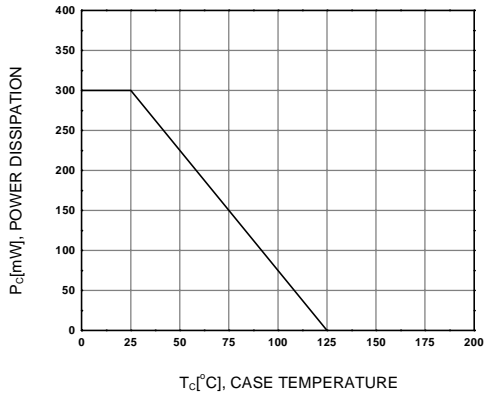
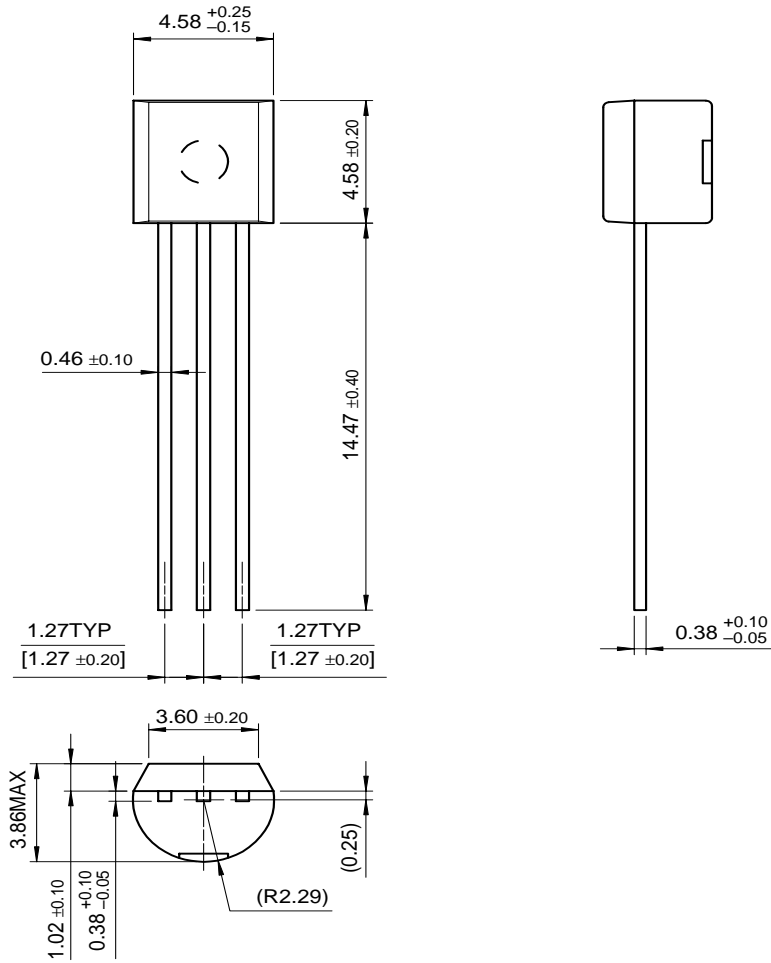


Figure 13. Power Derating

Package Dimensions

TO-92



Dimensions in Millimeters

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- A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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