

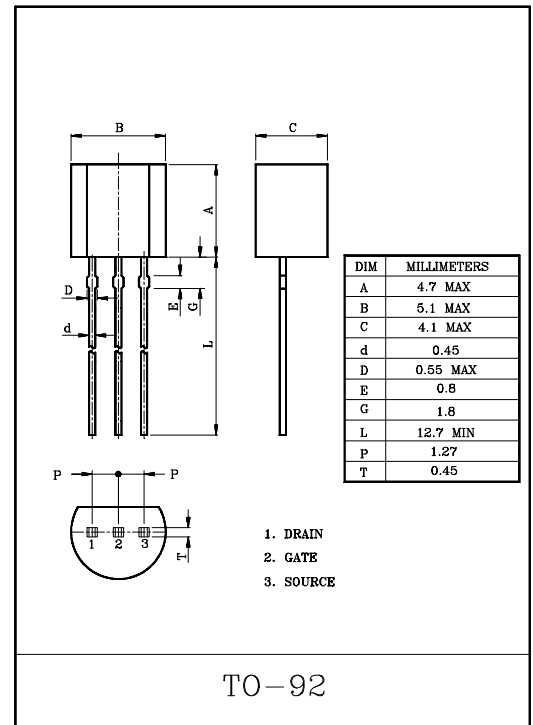
LOW NOISE AUDIO AMPLIFIER APPLICATION.

#### FEATURES

- High  $|y_{fs}|$  : 15mS(Typ.)  
: ( $V_{DS}=10V, V_{GS}=0$ )
- High Breakdown Voltage :  $V_{GDS}=-50V$ .
- Low Noise : NF=1.0dB(Typ.)  
( $V_{DS}=10V, I_D=0.5mA, f=1kHz, R_g=1k\Omega$ )  
( $f=120MHz$ )
- High Input Impedance :  $I_{GSS}=-1nA(Max.)$  ( $V_{GS}=-30V$ ).

#### MAXIMUM RATINGS ( $T_a=25^\circ C$ )

CHARACTERISTIC	SYMBOL	RATING	UNIT
Gate-Drain Voltage	$V_{GDS}$	-50	V
Gate Current	$I_G$	10	mA
Drain Power Dissipation	$P_D$	300	mW
Junction Temperature	$T_j$	125	$^\circ C$
Storage Temperature Range	$T_{stg}$	-55~125	$^\circ C$

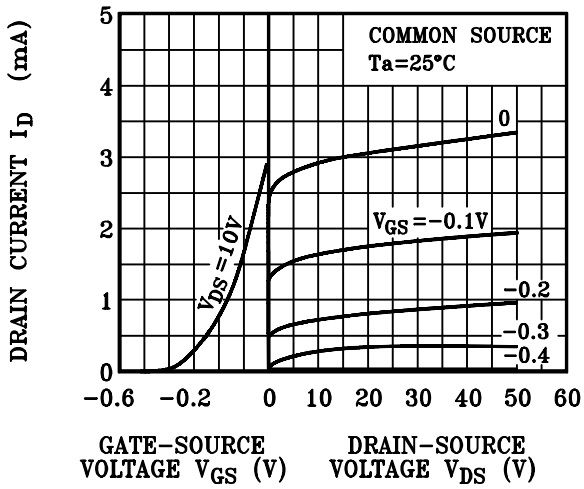


#### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ C$ )

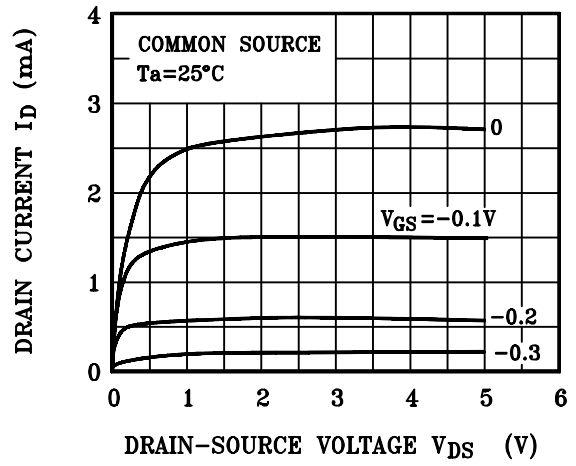
CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Gate Leakage Current	$I_{GSS}$	$V_{GS}=-30V, V_{DS}=0$	-	-	-1.0	nA
Gate-Drain Breakdown Voltage	$V_{(BR)GDS}$	$V_{DS}=0, I_G=-100\mu A$	-50	-	-	V
Drain Current	$I_{DSS}$ (Note)	$V_{DS}=10V, V_{GS}=0$	1.2	-	14	mA
Gate-Source Cut-off Voltage	$V_{GS(OFF)}$	$V_{DS}=10V, I_D=0.1\mu A$	-0.2	-	-1.5	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, V_{GS}=0, f=1kHz$	4.0	15	-	mS
Input Capacitance	$C_{iss}$	$V_{DS}=10V, V_{GS}=0, f=1MHz$	-	13	-	pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DG}=10V, I_D=0, f=1MHz$	-	3.0	-	pF
Noise Figure	NF(1)	$V_{DS}=10V, R_g=1k\Omega$ $I_D=0.5mA, f=10Hz$	-	5.0	10	dB
	NF(2)	$V_{DS}=10V, R_g=1k\Omega$ $I_D=0.5mA, f=1kHz$	-	1.0	2.0	

Note :  $I_{DSS}$  Classification Y:1.2~3.0, GR:2.6~6.5, BL:6.0~14.0

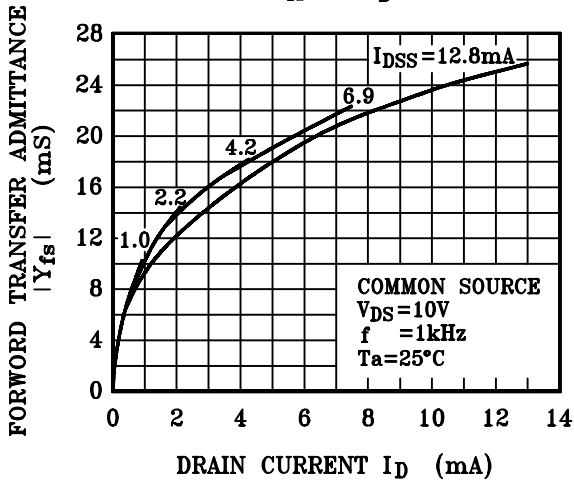
## STATIC CHARACTERISTICS



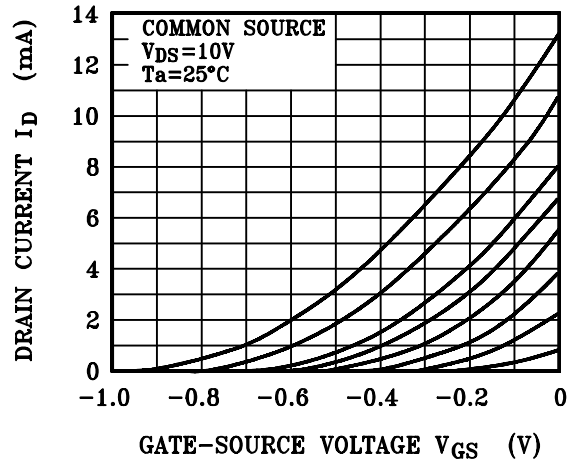
## $I_D - V_{DS}$ (LOW VOLTAGE REGION)



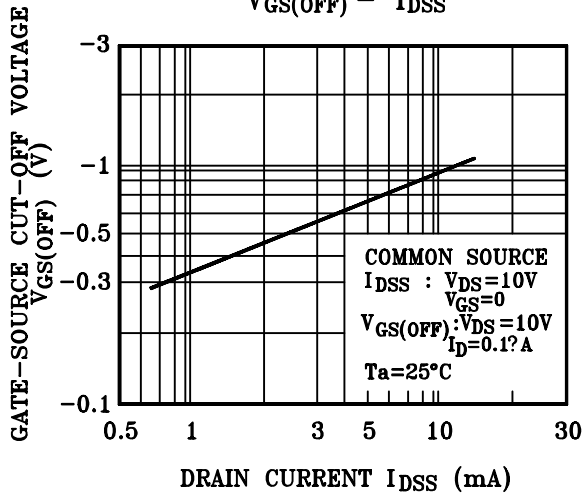
## $|Y_{fs}| - I_D$



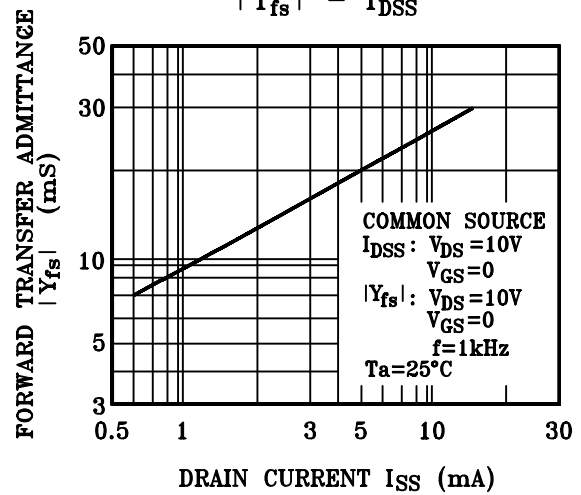
## $I_D - V_{GS}$



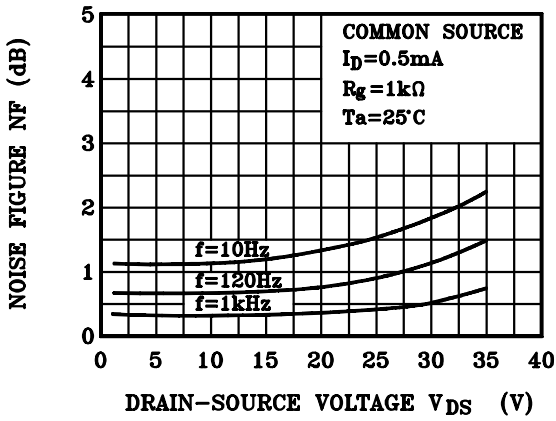
## $V_{GS(OFF)} - I_{DSS}$



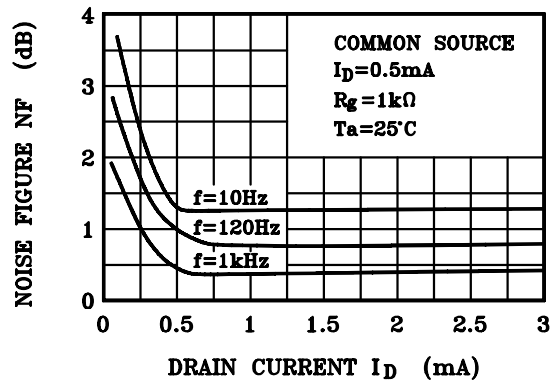
## $|Y_{fs}| - I_{DSS}$



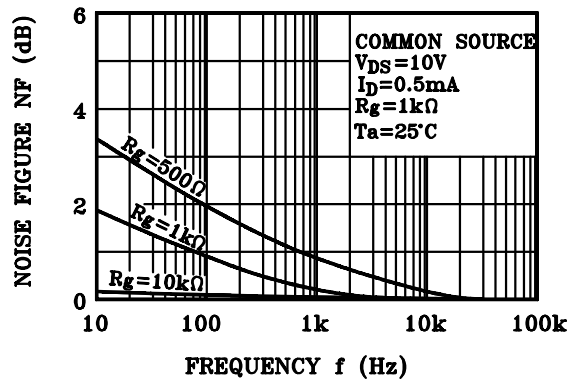
NF -  $V_{DS}$



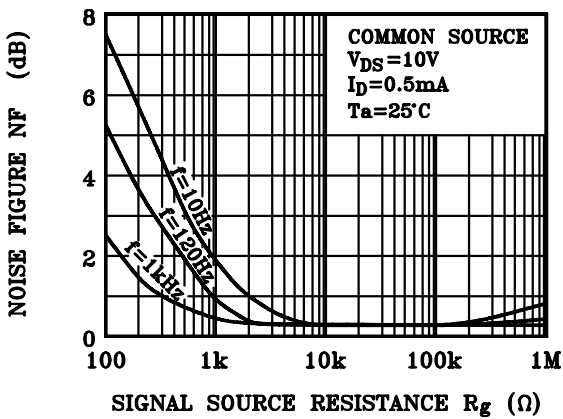
NF -  $I_D$



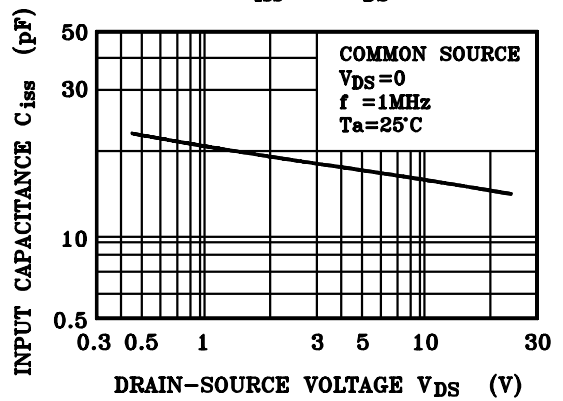
NF -  $f$



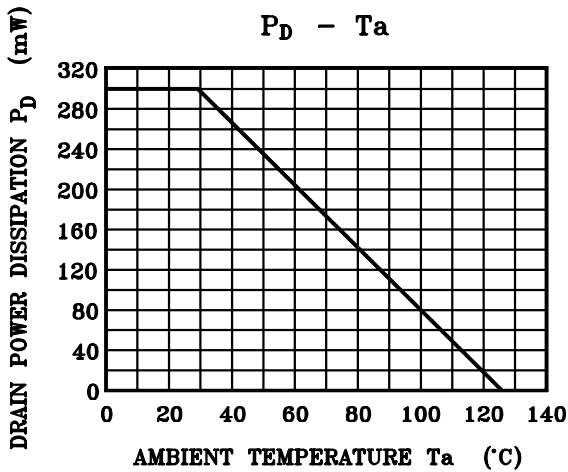
NF -  $R_g$



$C_{iss}$  -  $V_{DS}$



$P_D$  -  $T_a$



$C_{rss}$  -  $V_{GD}$

