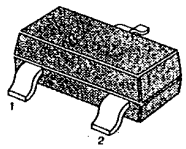
KSK123 SI N-CHANNEL JUNCTION FET

T-29-25

AF IMPEDANCE CONVERTER

- BUILT-IN DIODE BETWEEN G AND S
- LOW NV

SOT-23



1. Base 2. Emitter 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

Characteristic	Symbol	Rating	Unit
Drain Source Voltage	V_{DSO}	20	V
Drain Gate Voltage	V_{DGO}	20	V
Drain Source Current	I_{DSO}	2	mA
Drain Gate Current	I_{DGO}	2	mA
Gate Source Current	I_{GSO}	2	mA
Power Dissipation	P_D	200	mW
Operate Temperature	T_{OPR}	−20~80	°C
Storage Temperature	T_{STG}	−55~100	°C

ELECTRICAL CHARACTERISTICS (T_a=25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Drain Current	I_{DSS}	V_{DS}=4.5V, V_{GS}=0 R_S=2.2kohm ± 1%	130	200	470	μA
Transconductance	gm	V_{DS}=4.5V, V_{GS}=0 R_S=2.2kohm±1%, f=1kHz	0.9	1.6		mS
		C_G=10pF, A curve			4	μV
Voltage Gain	G_V1	V_{DS}=4.5V, R_S=2.2kohm ± 1% C_G=10pF, E_G=10mV, f=70Hz	−1			dB
Voltage Gain	G_V2	V_{DS}=12V, R_S=2.2kohm±1% C_G=10pF, E_G=10mV, f=70Hz	0			dB
Voltage Gain	G_V3	V_{DS}=1.5V, R_S=2.2kohm±1% C_G=10pF, E_G=10mV, f=70Hz	−4			dB

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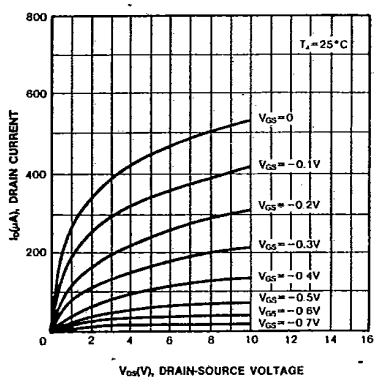
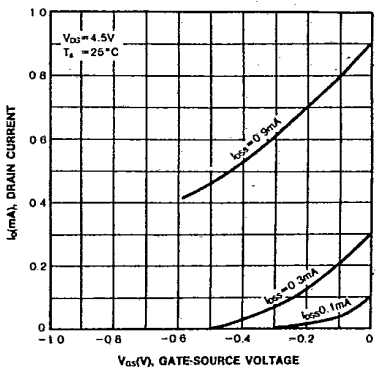
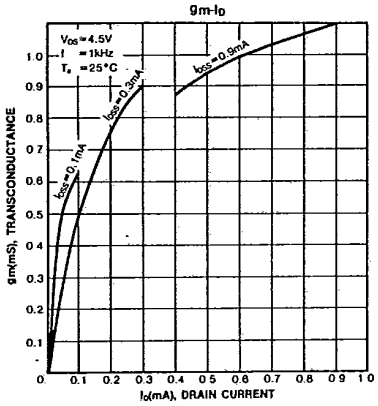
I_D-V_{DS}



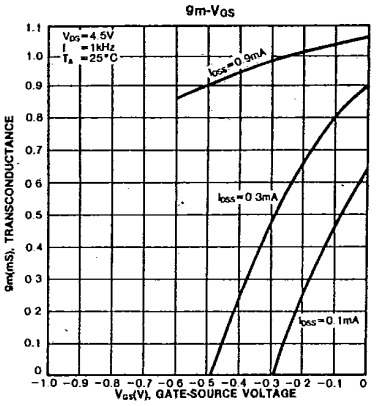
I_D-V_{GS}



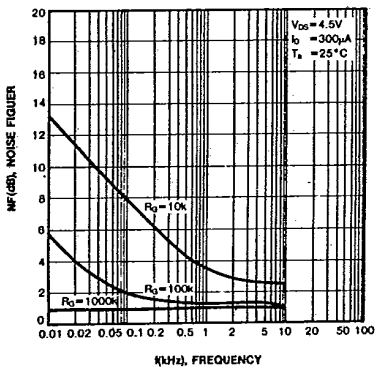
g_m-I_D



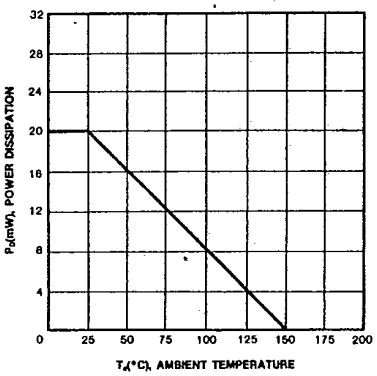
g_m-V_{GS}



NF-f



P_D-T_A



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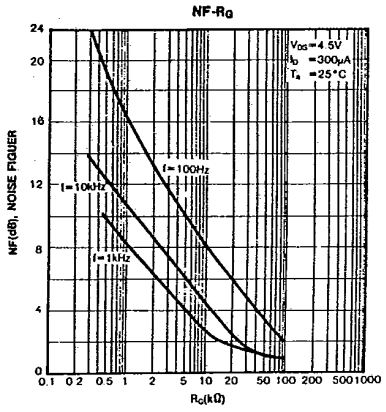
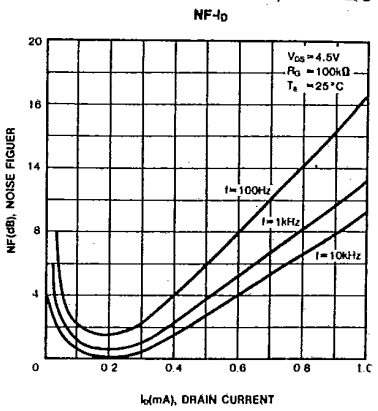
T-29-25


NF-RG
V_{DS}=4.5V
I_D =300μA
T_a =25°C
f=100Hz
f=10kHz
f=1kHz
NF(dB), NOISE FIGUER
0 4 8 12 16 20 24
0.1 0.2 0.5 1 2 5 10 20 50 100 200 500 1000
R_G(kΩ)


NF-I_D
V_{DS}=4.5V
R_G =100kΩ
T_a =25°C
f=100Hz
f=1kHz
f=10kHz
NF(dB), NOISE FIGUER
0 4 8 12 16 20
0 0.2 0.4 0.6 0.8 1.0
I_D(mA), DRAIN CURRENT