AUK Semiconductor

STK596M

N-Channel Junction FET

Description

- Capacitor Microphone application

Features

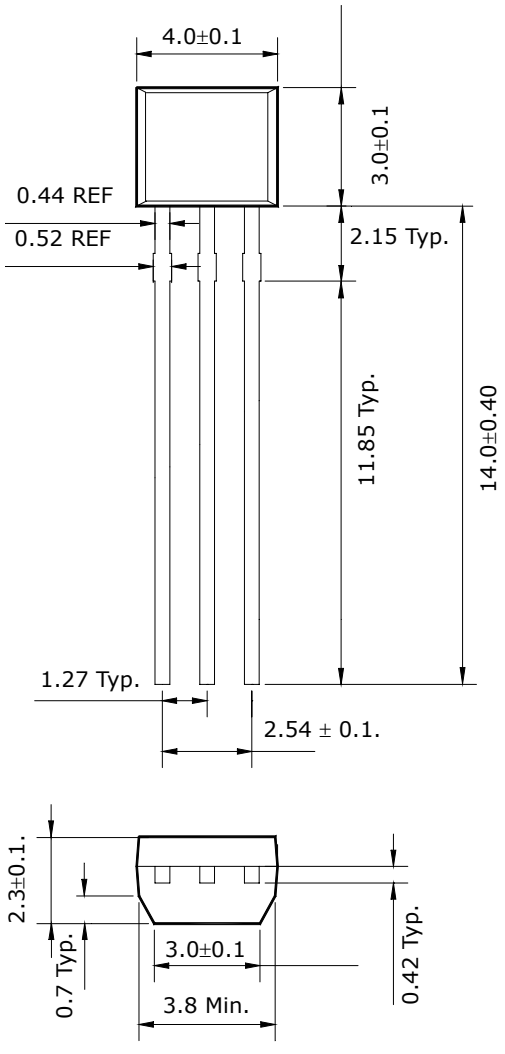
- Especially suited for use in audio, telephone capacitor microphones
- Excellent voltage characteristic
- Excellent transient characteristic

Ordering Information

Type NO.	Marking	Package Code
STK596M	K596	TO-92M

Outline Dimensions

unit : mm



PIN Connections

1. Source
2. Gate
3. Drain

Absolute maximum ratings (Ta=25°C)

Characteristic	Symbol	Rating	Unit
Gate-Drain voltage	V_{GDO}	-20	V
Gate Current	I_G	10	mA
Drain Current	I_D	1	mA
Power dissipation	P_D	100	mW
Junction Temperature	T_J	150	°C
Storage Temperature range	T_{stg}	-55~150	°C

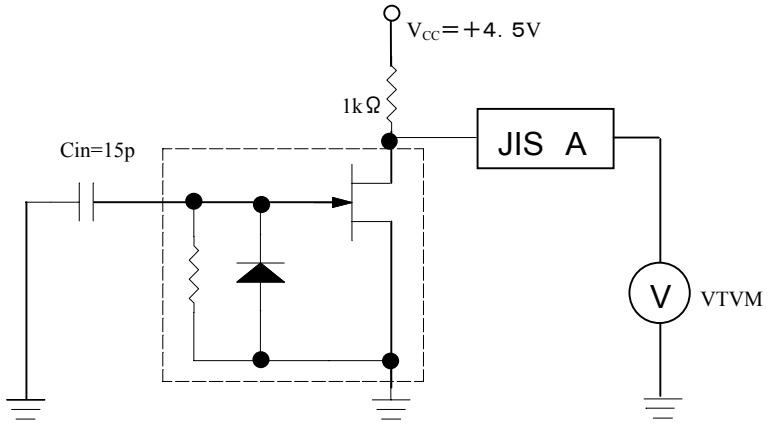
Electrical Characteristics (Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Gate-drain breakdown voltage	$V_{(BR)GDO}$	I_G=-100μA	-20			V
Cutoff voltage	$V_{GS(off)}$	V_{DS}=5V, I_D=1 μA		-0.6	-1.5	V
Zero Voltage Drain current	I_{DSS}	V_{DS}=5V, V_{GS}=0	100		800	μA
Forward transfer admittance	$\|y_{fs}\|$	V_{DS}=5V, V_{GS}=0, f=1KHz	0.4	1.2		mS
Input capacitance	Ciss	V_{DS}=5V, V_{GS}=0, f=1MHz		3.5		pF
Reverse Transfer capacitance	Crss	V_{DS}=5V, V_{GS}=0, f=1MHz		0.65		pF
Output Noise Voltage	V_{NO}	V_{IN}=0, A CURVE			-110	dB

I_{DSS} Classification

Classification	A	B	C	D	E
I_{DSS}[μA]	100 ~ 170	150 ~ 240	210 ~ 350	320 ~ 480	440 ~ 800

Noise Voltage Test Circuit



Electrical Characteristic Curves

Fig. 1 I_D - V_{DS}

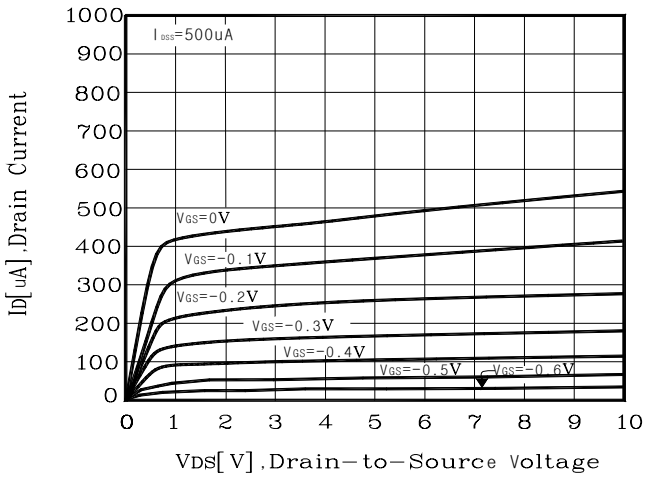


Fig. 2 I_D - V_{DS}

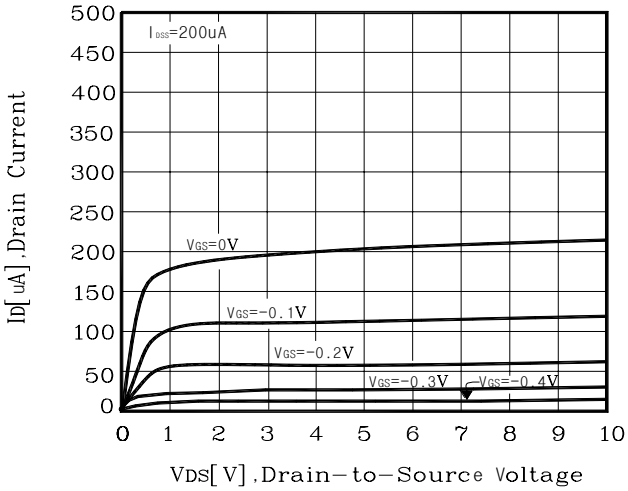


Fig. 3 I_D - V_{GS}

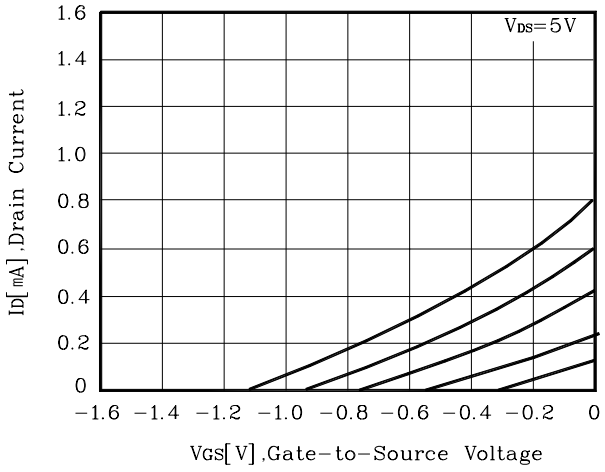


Fig. 4 | Yfs | - I_{DSS}

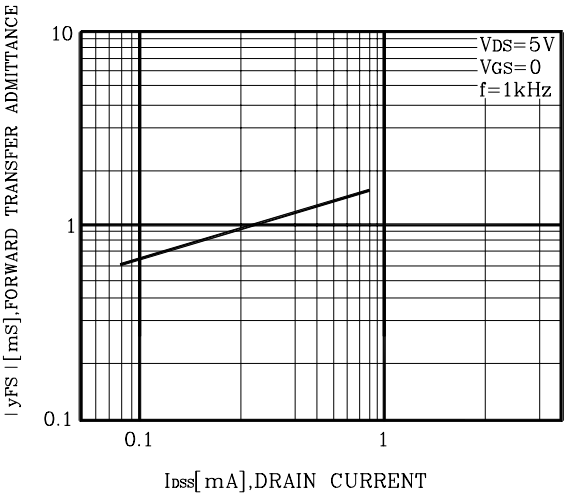


Fig. 5 V_{GS}(Off) - I_{DSS}

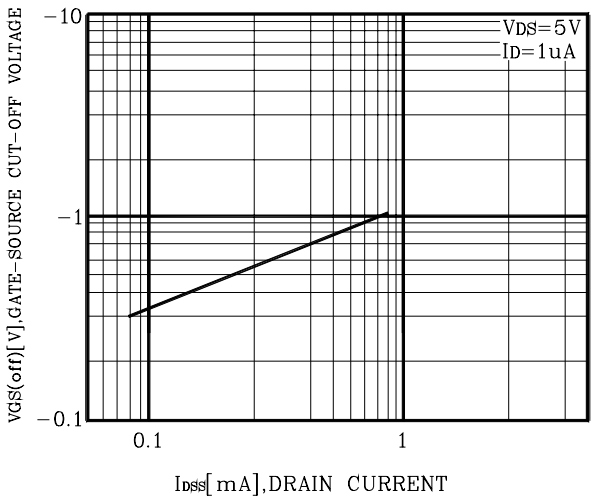
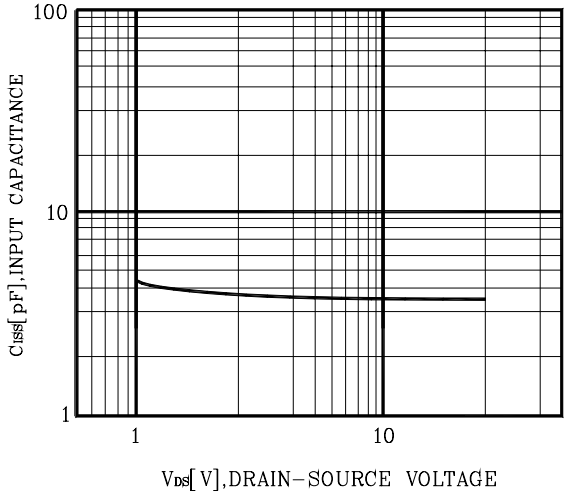


Fig. 6 C_{iss} - V_{DS}



Electrical Characteristic Curves

Fig. 7 C_{rss} - V_{DS}

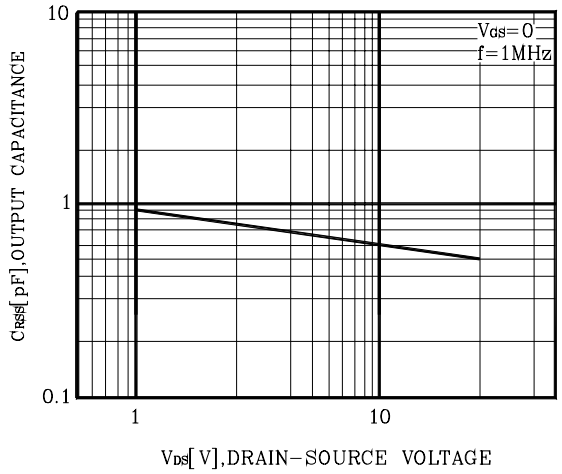


Fig. 8 P_D - T_a

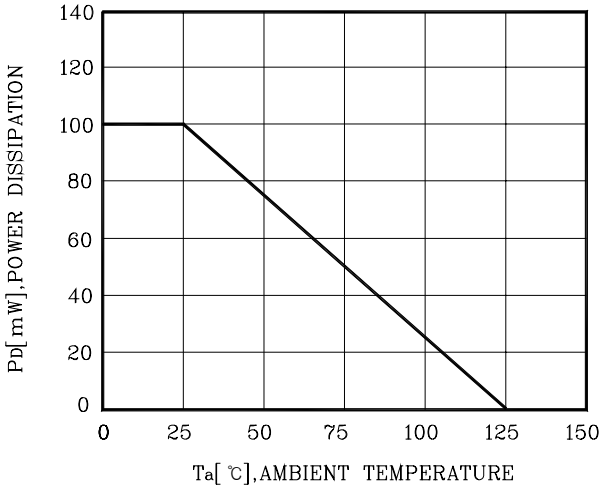
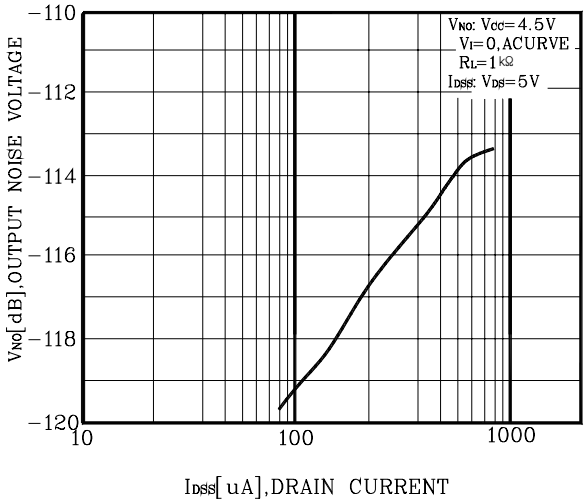


Fig. 9 V_{NO} - I_{DSS}



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