



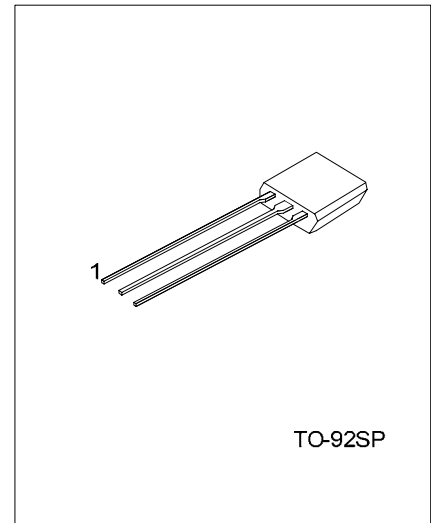
K596

N-CHANNEL JFET

CAPACITOR MICROPHONE APPLICATIONS

FEATURES

- *Especially Suited for use in Audio, Telephone Capacitor Microphones
- *Excellent Voltage characteristic
- *Excellent Transient Characteristic



*Pb-free plating product number: K596L

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
K596-x-T9S-K	K596L-x-T9S-K	TO-92SP	S	G	D	Bulk

K596L-x-T9S-K (1) Packing Type (2) Package Type (3) Rank (4) Lead Plating	(1) K: Bulk (2) T9S: TO-92SP (3) x: refer to CLASSIFICATION OF I_{DSS} (4) L: Lead Free Plating, Blank: Pb/Sn
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■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C ,unless otherwise specified)

PARAMETER	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	+125	°C
Storage Temperature	T_{STG}	-55~+125	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

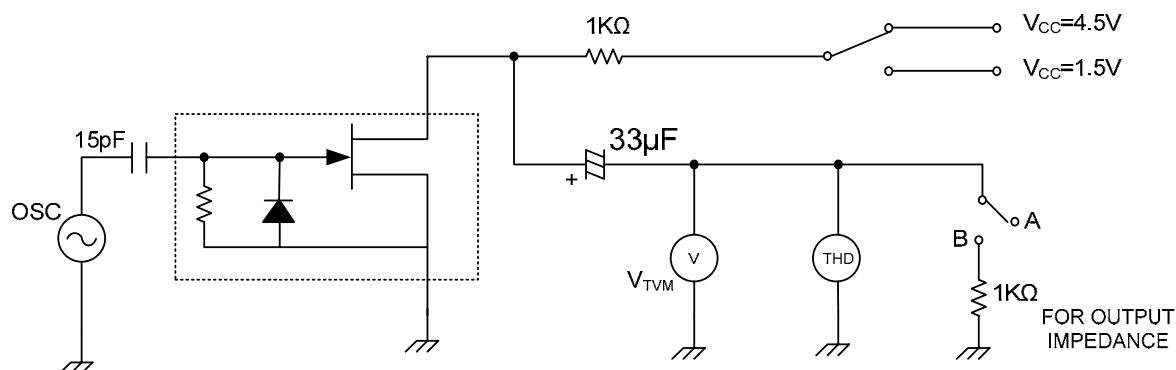
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Gate Drain Breakdown Voltage	BV_{GDO}	$I_G = -100\mu A$	-20			V
Gate Source Cut off Voltage	$V_{GS(OFF)}$	$V_{DS}=5V, I_D=1\mu A$		-0.6	-1.5	V
Drain Current	I_{DSS}	$V_{DS}=5V, V_{GS}=0$	100		800	μA
Forward Transfer Admittance	IY_{FSI}	$V_{DS}=5V, V_{GS}=0, f=1KHz$	0.4	1.2		mS
Input Capacitance	C_{ISS}	$V_{DS}=5V, V_{GS}=0, f=1MHz$		3.5		pF
Output Capacitance	C_{RSS}	$V_{DS}=5V, V_{GS}=0, f=1MHz$		0.65		pF

■ CLASSIFICATION OF I_{DSS}

RANK	A	B	C	D	E
$I_{DSS} (\mu A)$	100-170	150-240	210-350	320-480	440-800

■ TEST CIRCUIT(Ta=25°C)



PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Voltage Gain	G _v	V _{IN} =10mV, f=1KHz		-3		dB
Reduced Voltage Characteristic	ΔG _V	V _{IN} =10mV, f=1KHz, V _{CC} =4.5V→1.5V		-1.2	-3.5	dB
Frequency Characteristic	ΔG _v f	f=1KHz to 110Hz			-1	dB
Input Resistance	Z _{IN}	f=1KHz	25			MΩ
Output Resistance	Z _O	f=1KHz			700	Ω
Total Harmonic distortion	THD	V _{IN} =30mV, f=1KHz		1		%
Output Noise Voltage	V _{NO}	V _{IN} =0			-110	dB

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