



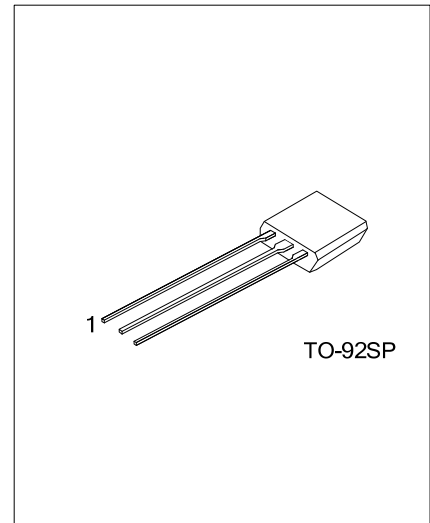
K596

N-CHANNEL JFET

CAPACITOR MICROPHONE APPLICATIONS

FEATURES

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



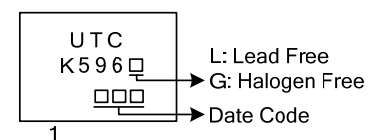
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
K596L-x-T9S-K	K596G-x-T9S-K	TO-92SP	S	G	D	Bulk

Note: Pin Assignment: S: Source D: Drain G: Gate

K596L-x-T9S-K	(1) K: Bulk (2) T9S: TO-92SP (3) x: refer to CLASSIFICATION OF I_{DSS} (4) L: Lead Free, G: Halogen Free and Lead Free
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MARKING



■ **ABSOLUTE MAXIMUM RATINGS** ($T_A=25^{\circ}\text{C}$,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	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~+125	$^{\circ}\text{C}$

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.

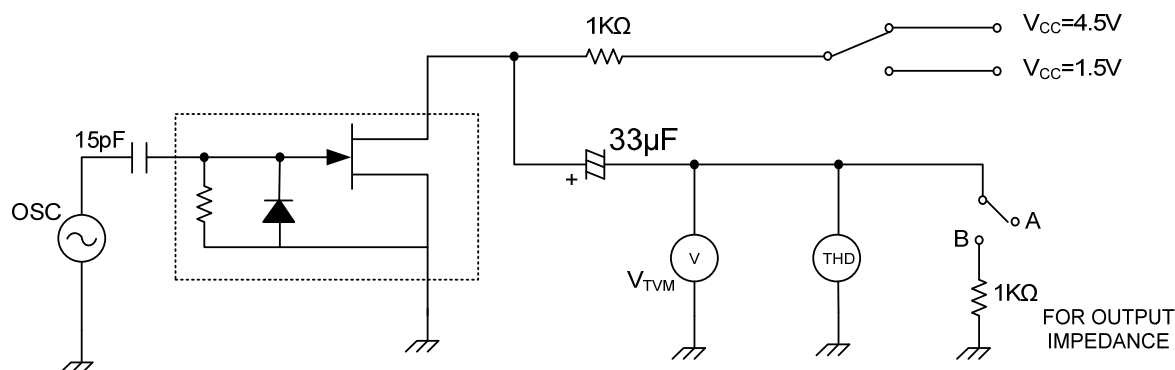
■ **ELECTRICAL CHARACTERISTICS** ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

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

■ **CLASSIFICATION OF I_{DSS}**

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

■ TEST CIRCUIT ($T_A=25^\circ\text{C}$)



PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Voltage Gain	G_v	$V_{IN}=10\text{mV}$, $f=1\text{KHz}$		-3		dB
Reduced Voltage Characteristic	ΔG_v	$V_{IN}=10\text{mV}$, $f=1\text{KHz}$, $V_{CC}=4.5\text{V} \rightarrow 1.5\text{V}$		-1.2	-3.5	dB
Frequency Characteristic	$\Delta G_v f$	$f=1\text{KHz}$ to 110Hz			-1	dB
Input Resistance	Z_{IN}	$f=1\text{KHz}$	25			$\text{M}\Omega$
Output Resistance	Z_O	$f=1\text{KHz}$			700	Ω
Total Harmonic distortion	THD	$V_{IN}=30\text{mV}$, $f=1\text{KHz}$		1		%
Output Noise Voltage	V_{NO}	$V_{IN}=0$			-110	dB

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