



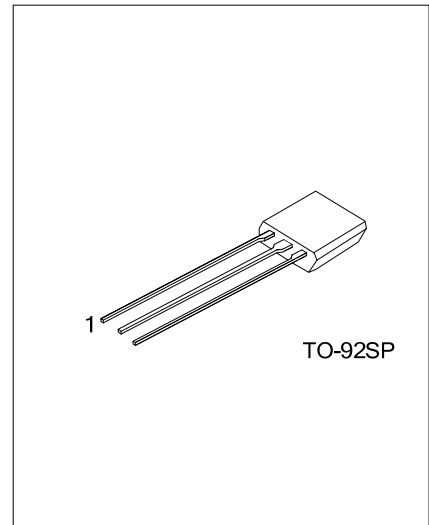
## K596

N-CHANNEL JFET

### CAPACITOR MICROPHONE APPLICATIONS

#### FEATURES

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



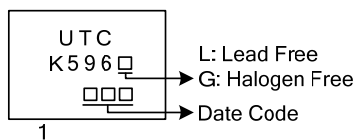
#### ORDERING INFORMATION

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

<p>K596G-x-T9S-K</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Green Package</p>	<p>(1) K: Bulk (2) T9S: TO-92SP (3) x: refer to CLASSIFICATION OF I<sub>DSS</sub> (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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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.

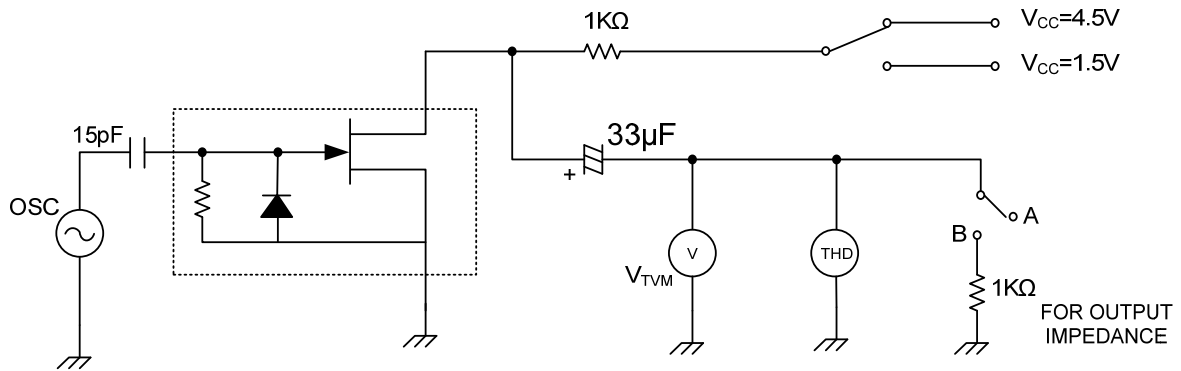
■ ELECTRICAL CHARACTERISTICS (  $T_A=25^{\circ}\text{C}$  , unless otherwise specified)

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	$\mu\text{A}$
Forward Transfer Admittance	$Y_{FSI}$	$V_{DS}=5\text{V}, V_{GS}=0, f=1\text{KHz}$	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<sub>A</sub>=25°C)



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

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