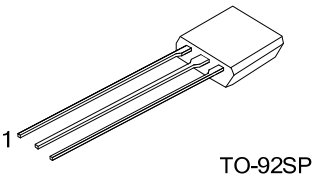
K596

N-CHANNEL JFET

CAPACITOR MICROPHONE APPLICATIONS



TO-92SP

■ FEATURES

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

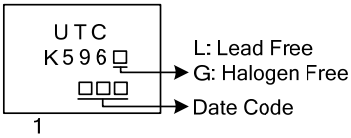
■ ORDERING INFORMATION

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)Packing Type (2)Package Type (3)Rank (4)Green Package	(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

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=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.

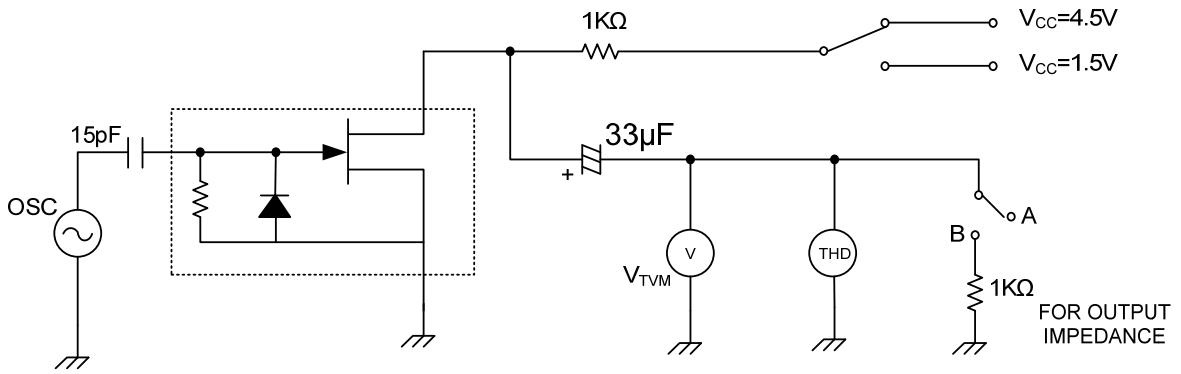
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Gate Drain Breakdown Voltage	BV_{GDO}	I_G=-100μA	-20			V
Gate Source Cut off Voltage	$V_{GS(OFF)}$	V_{DS}=5V, I_D=1μA		-0.6	-1.5	V
Drain Current	I_{DSS}	V_{DS}=5V, V_{GS}=0	100		800	μA
Forward Transfer Admittance	|YFS|	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} (μA)	100-170	150-240	210-350	320-480	440-800

■ TEST CIRCUIT (T_A=25°C)



PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Voltage Gain	Gv	V_{IN}=10mV, f=1KHz		-3		dB
Reduced Voltage Characteristic	ΔGvV	V_{IN}=10mV, f=1KHz, Vcc=4.5V→1.5V		-1.2	-3.5	dB
Frequency Characteristic	ΔGvf	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