

# 2SK596



2037

N-Channel Junction  
Silicon Field-Effect Transistor

## Capacitor Microphone Applications

(C2215)

### Features

- Especially suited for use in audio, telephone capacitor microphones
- Excellent voltage characteristic
- Excellent transient characteristic
- Adoption of FBET process

### Absolute Maximum Ratings at Ta=25°C

			unit
Gate to Drain Voltage	$V_{GDO}$	-20	V
Gate Current	$I_G$	10	mA
Drain Current	$I_D$	1	mA
Allowable Power Dissipation	$P_D$	100	mW
Junction Temperature	$T_J$	125	°C
Storage Temperature	$T_{stg}$	-55 to +125	°C

### Electrical Characteristics at Ta=25°C

		min	typ	max	unit
Gate to Drain Breakdown Voltage	$V_{(BR)GDO}$ $I_G = -100\mu A$	-20			V
Cutoff 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*	$\mu A$
Forward Transfer Admittance	$ y_{fs} $ $V_{DS} = 5V, V_{GS} = 0, f = 1kHz$	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

\*: The 2SK596 is classified by  $I_{DSS}$  as follows (unit:  $\mu A$ ):

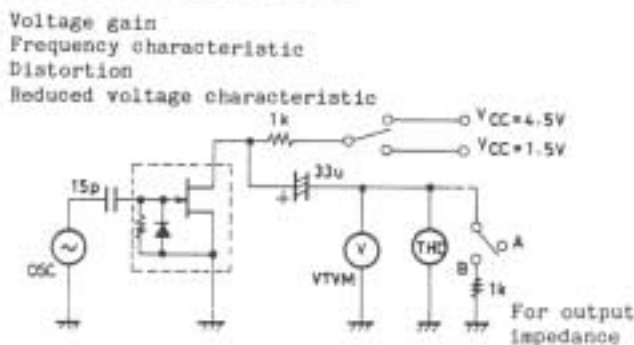
100	A	170	150	B	240	210	C	350	320	D	480	440	E	800
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[Ta=25°C,  $V_{CC} = 4.5V, R_L = 1k\Omega, C_{in} = 15pF$ , See specified Test Circuit.]

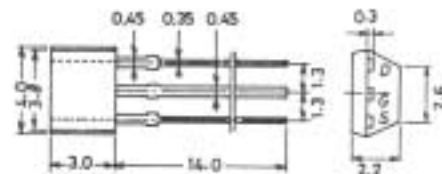
			min	typ	max	unit
Voltage Gain	$G_V$	$V_{in} = 10mV, f = 1kHz$		-3.0		dB
Reduced Voltage Characteristic	$\Delta G_V$	$V_{in} = 10mV, f = 1kHz$ $V_{CC} = 4.5 \rightarrow 1.5V$		-1.2	-3.5	dB
Frequency Characteristic	$\Delta G_{VF}$	$f = 1kHz$ to $110Hz$			-1.0	dB

Continued on next page.

### Specified Test Circuit



### Case Outline 2037 (unit:mm)



D: Drain  
G: Gate  
S: Source  
SANYO: SP'