

**2SK2219**

Capacitor Microphone Applications

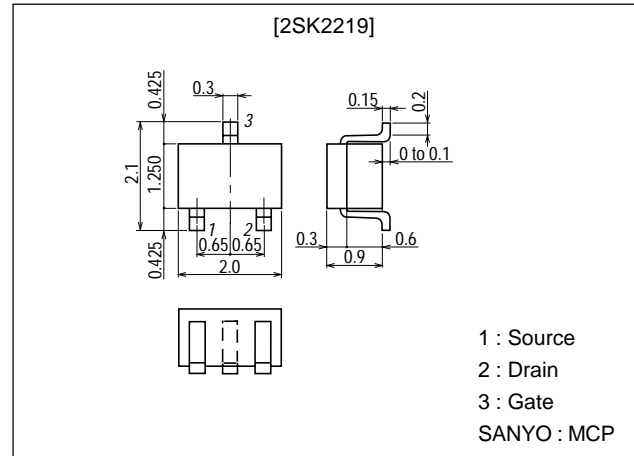
Features

- Ultrasmall-sized package permitting 2SK2219-applied sets to be made small and slim.
- Especially suited for use in audio, telephone capacitor microphones.
- Excellent voltage characteristic.
- Excellent transient characteristic.
- Adoption of FBET process.

Package Dimensions

unit:mm

2058A



Specifications

Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	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		150	°C
Storage Temperature	T_{stg}		-55 to +150	°C

Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Gate-to-Drain Breakdown Voltage	$V_{(BR)GDO}$	$I_G = -100\mu A$	-20			V
Zero-Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 5V, V_{GS} = 0$	140*		500*	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 5V, I_D = 1\mu A$	-0.2	-0.6	-1.2	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS} = 5V, V_{GS} = 0, f = 1kHz$	0.5	1.2		mS
Input Capacitance	C_{iss}	$V_{DS} = 5V, V_{GS} = 0, f = 1MHz$		4.1		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 5V, V_{GS} = 0, f = 1MHz$		0.88		pF

* : The 2SK2219 is classified by I_{DSS} as follows : (unit : μA)

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140	21	240	210	22	350	320	23	500
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Marking : D

 I_{DSS} rank : 21, 22, 23

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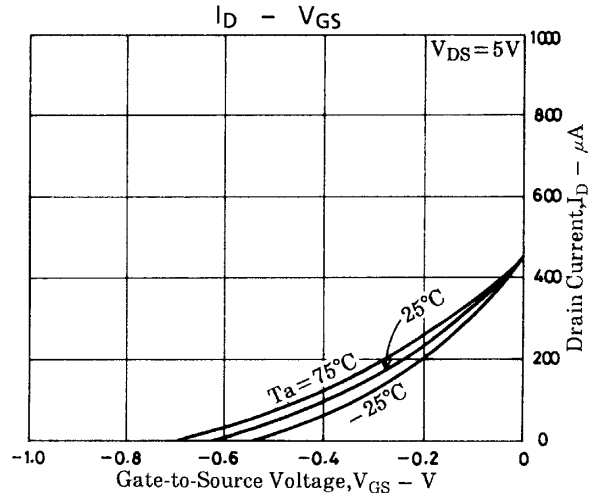
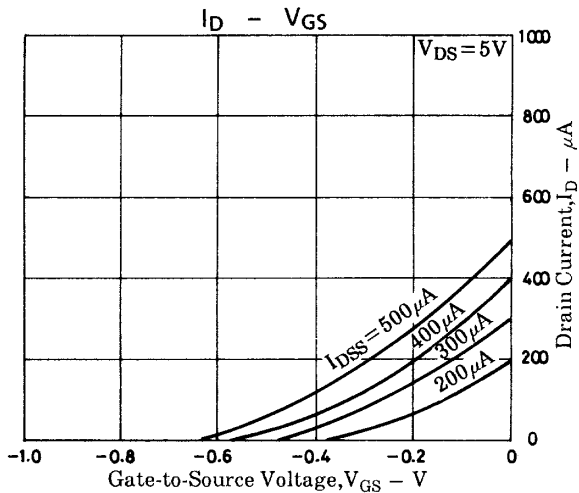
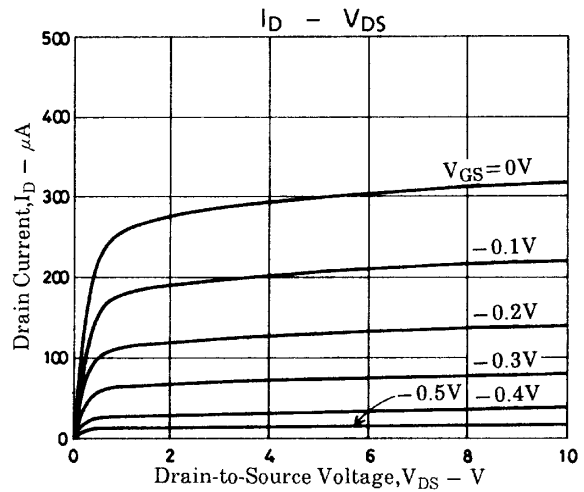
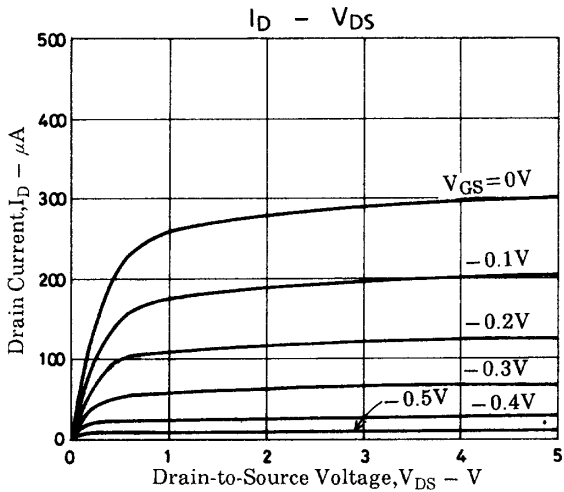
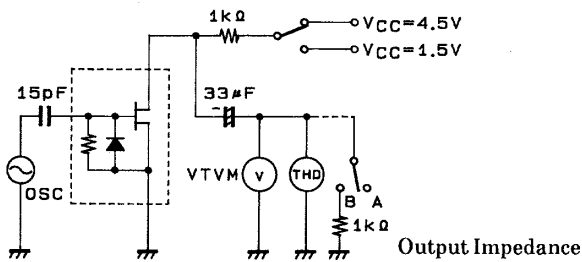
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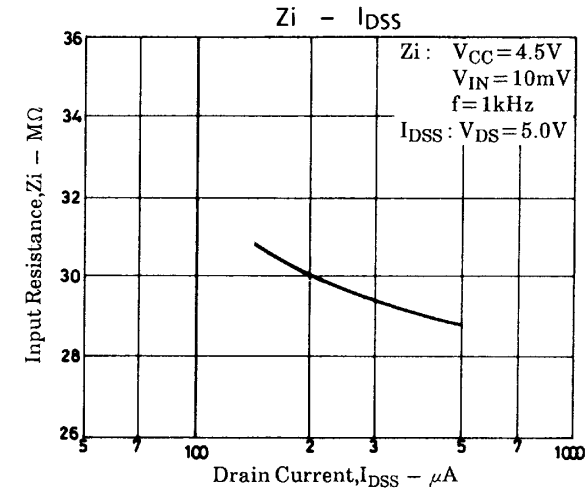
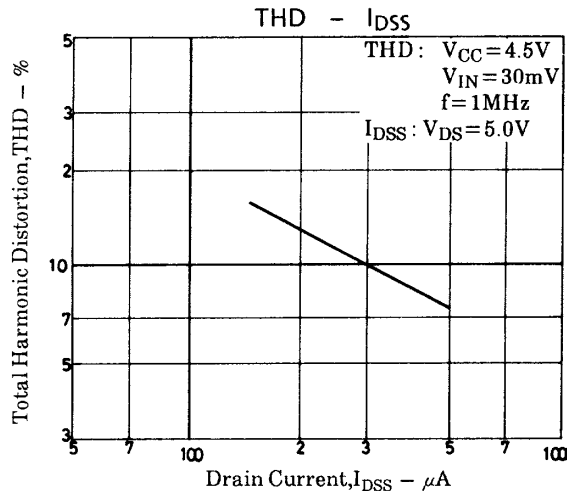
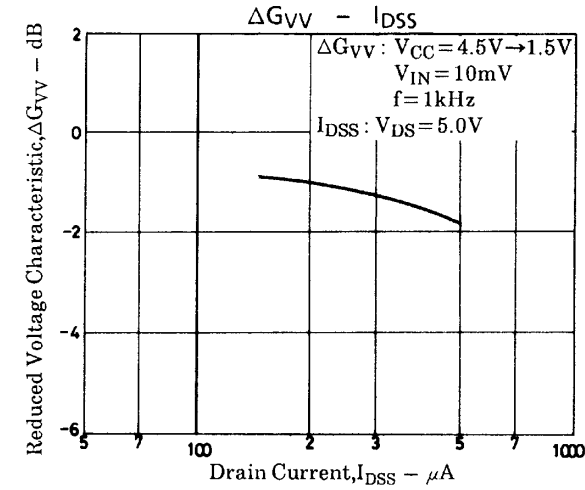
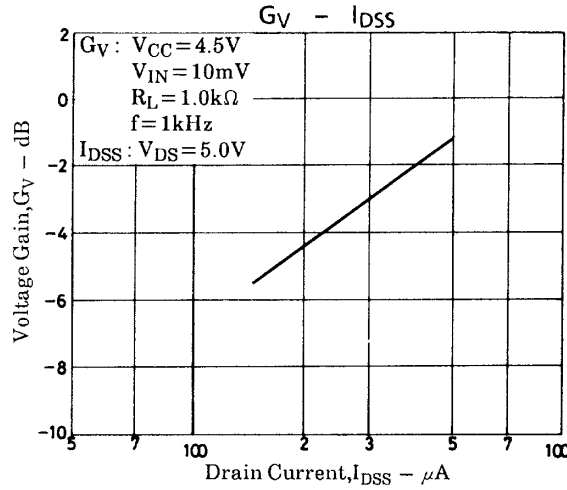
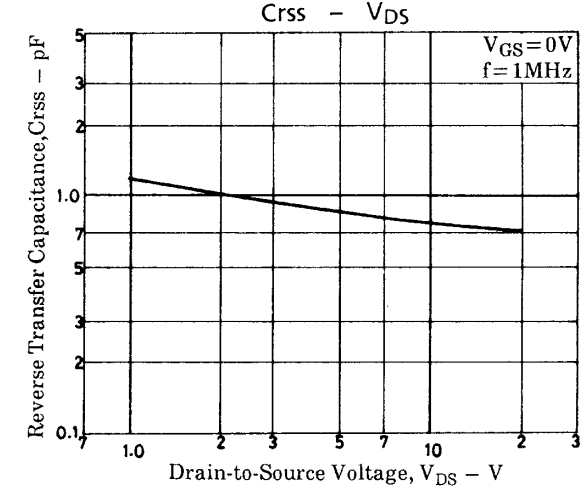
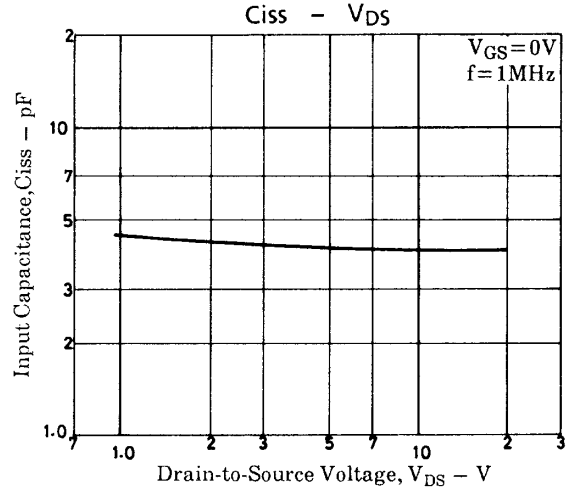
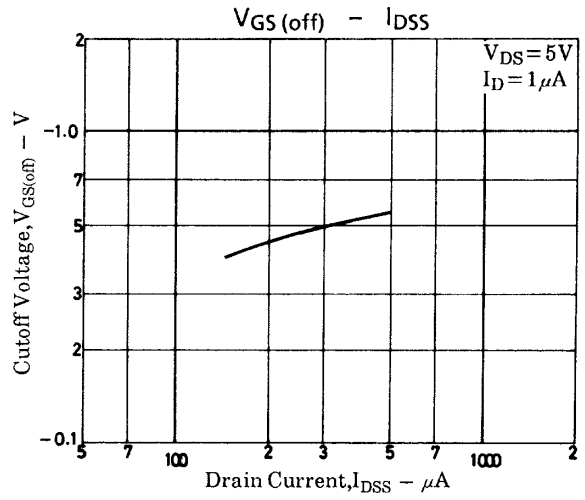
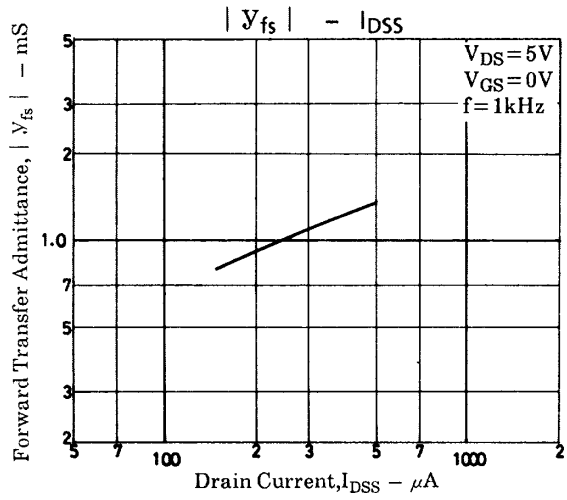
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Ta=25°C, VCC=4.5V, RL=1kΩ, Cin=15pF, See specified Test Circuit						
Voltage Gain	G _V	V _{IN} =10mV, f=1kHz		-3.0		dB
Reduced Voltage Characteristic	ΔG _{VV}	V _{IN} =10mV, f=1kHz, V _{CC} =4.5 → 1.5V		-1.2	-3.5	dB
Frequency Characteristic	ΔG _{Vf}	f=1kHz to 110Hz			-1.0	dB
Input Impedance	Z _{in}	f=1kHz	25			MΩ
Output Impedance	Z _o	f=1kHz			700	Ω
Total Harmonic Distortion	THD	V _{IN} =30mV, f=1kHz		1.0		%
Output Noise Voltage	V _{NO}	V _{IN} =0, A curve			-110	dB

Test Circuit

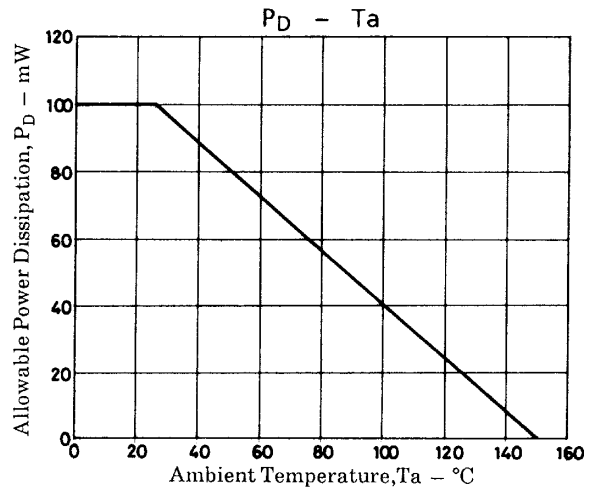
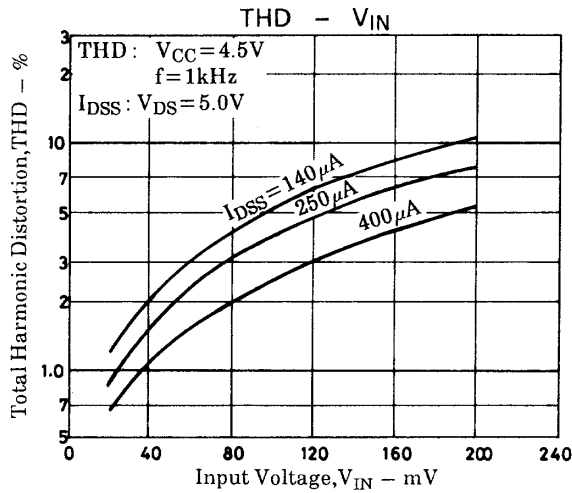
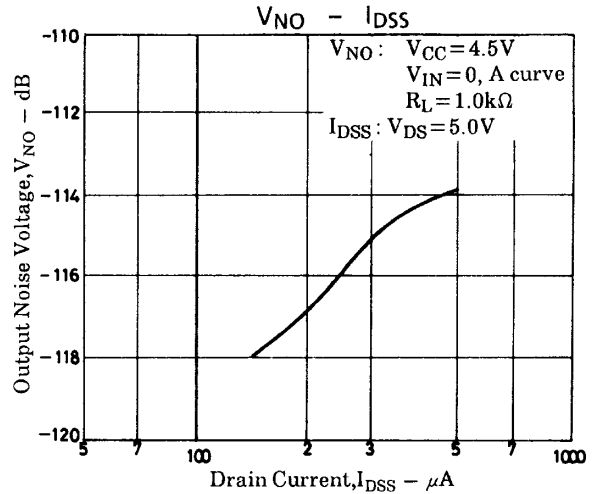
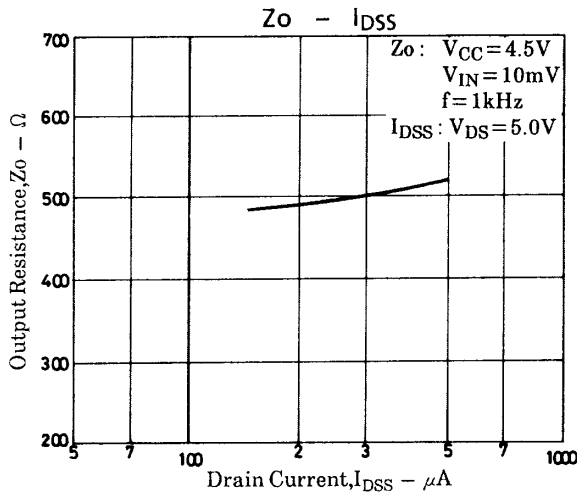
- Voltage Gain
- Frequency Characteristic
- Distortion
- Reduced Voltage Characteristic



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