

SANYO	No.4178A	2SK1578
		N-Channel Junction FET

Capacitor Microphone Applications

Features

- Especially suited for use in audio, telephone capacitor microphones.
- Excellent voltage characteristics.
- Excellent transient characteristics.
- 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	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
G-D Breakdown Voltage	V _{(BR)GDO}	I _G = -100μA	-20			V
Cutoff Voltage	V _{GS(off)}	V _{DS} = 5V, I _D = 1μA	-0.2	-0.6	-1.5	V
Drain Current	I _{DSS}	V _{DS} = 5V, V _{GS} = 0	100*		800*	μA
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		4.1		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} = 5V, V _{GS} = 0, f = 1MHz		0.88		pF

* : The 2SK1578 is classified by I_{DSS} as follows : (unit : μA)

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 = 1kΩ, 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 Characteristics	ΔG _{VV}	V _{IN} = 10mV, f = 1kHz V _{CC} = 4.5 → 1.5V		-1.2	-3.5	dB
Frequency Characteristics	ΔG _{Vf}	f = 1kHz to 110Hz			-1.0	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		1.0		%
Output Noise Voltage	V _{NO}	V _{IN} = 0, A curve			-110	dB

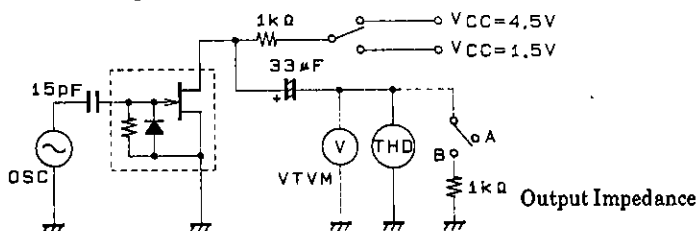
Test Circuit

Voltage Gain

Frequency Characteristics

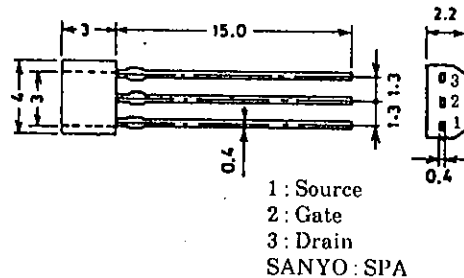
Distortion

Reduced Voltage Characteristics



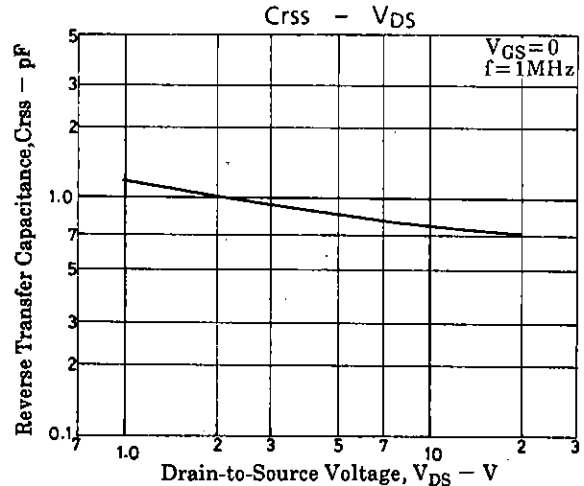
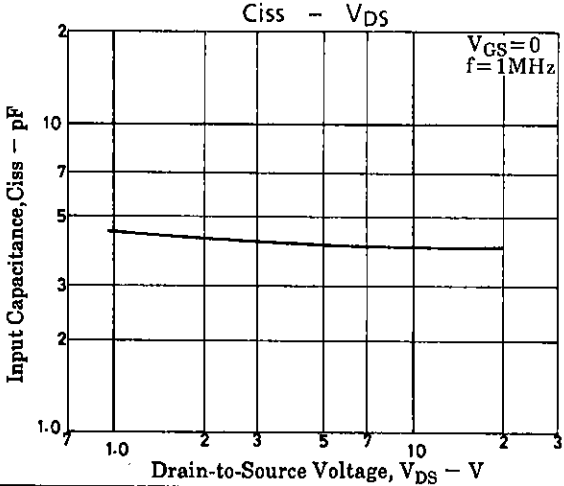
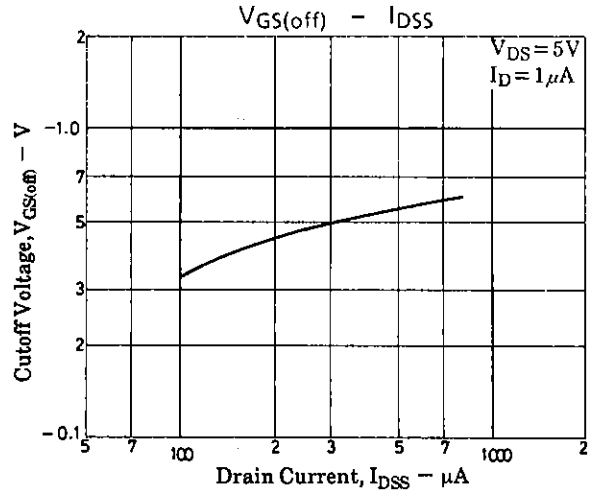
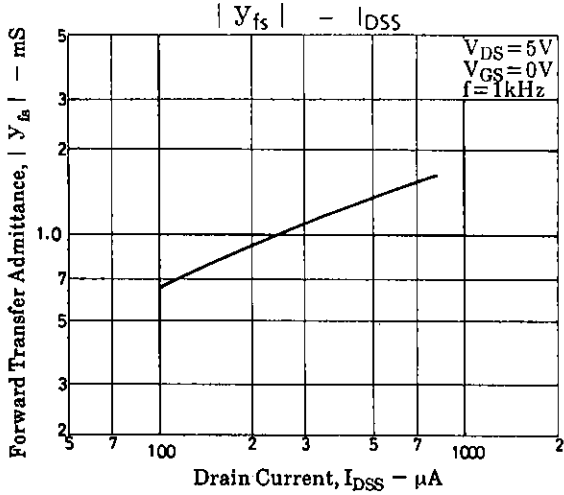
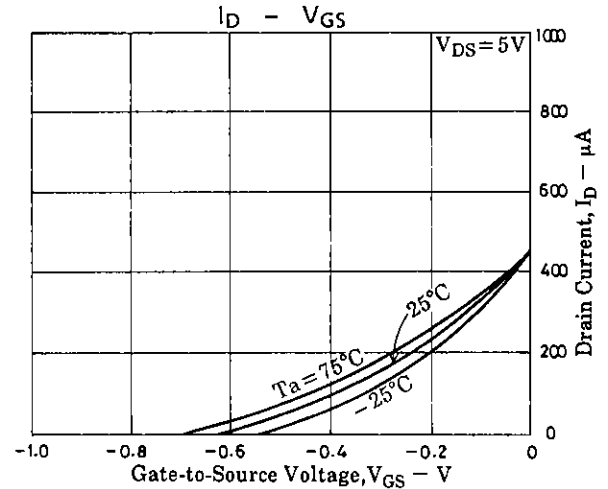
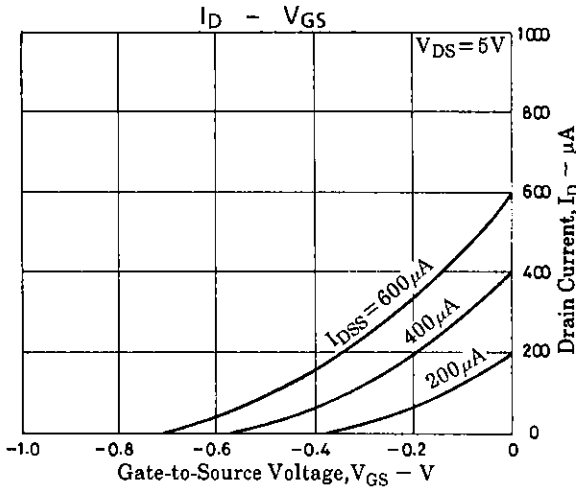
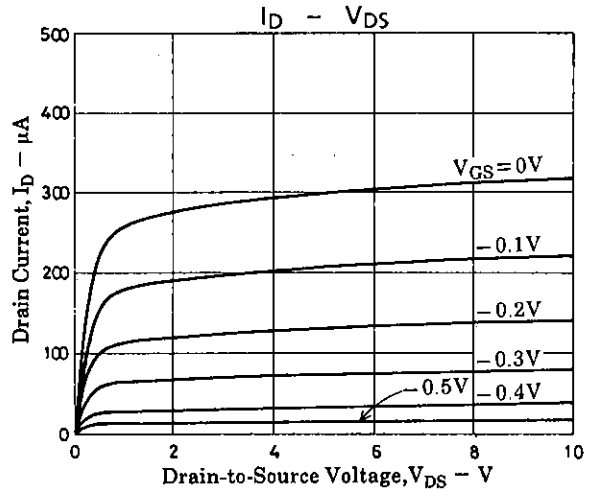
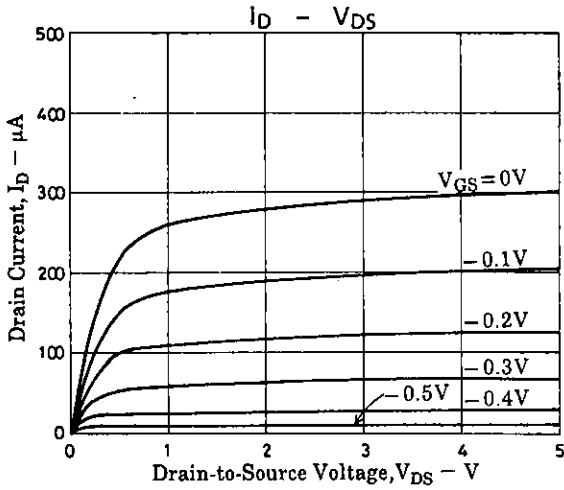
Package Dimensions 2034A

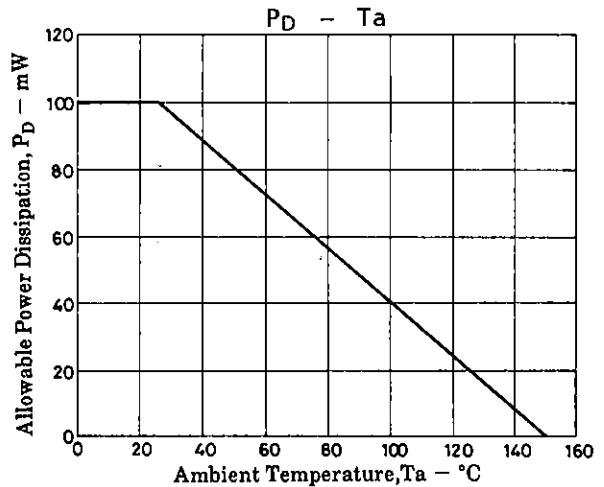
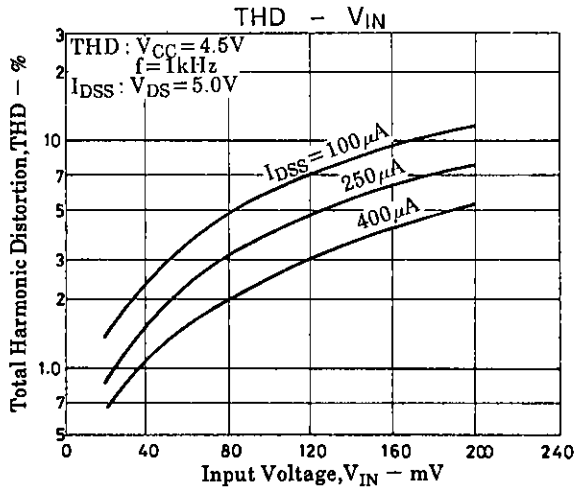
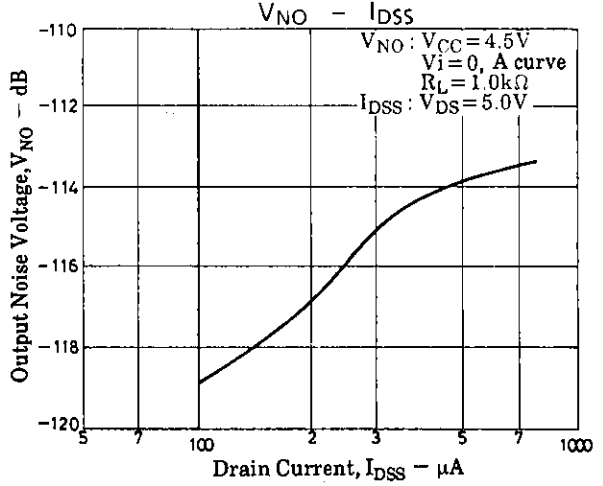
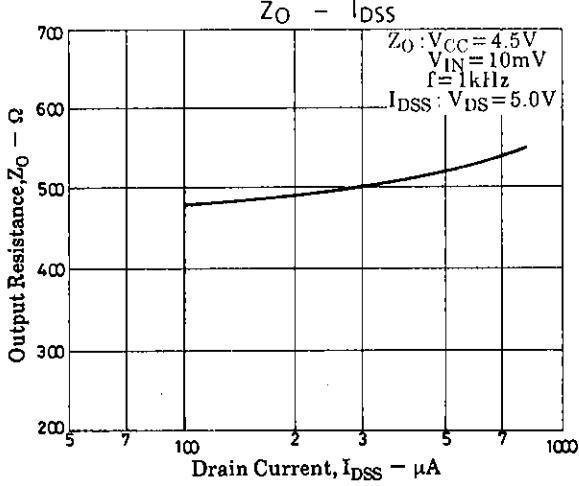
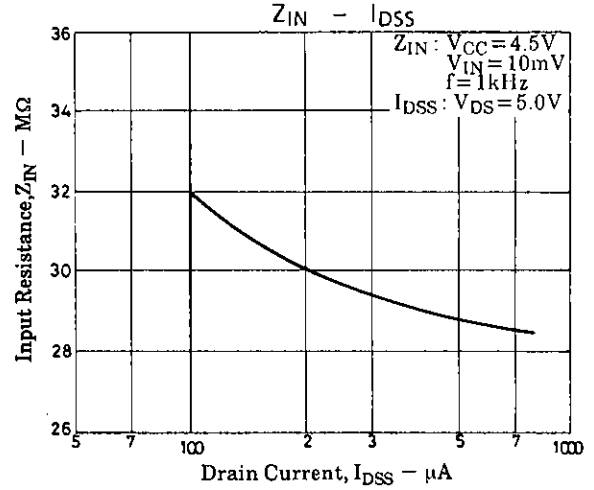
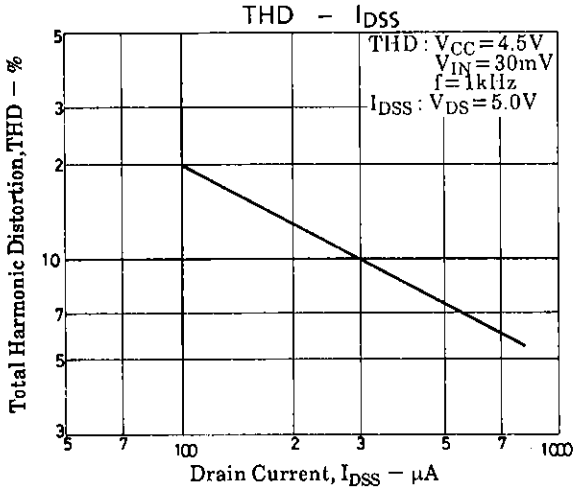
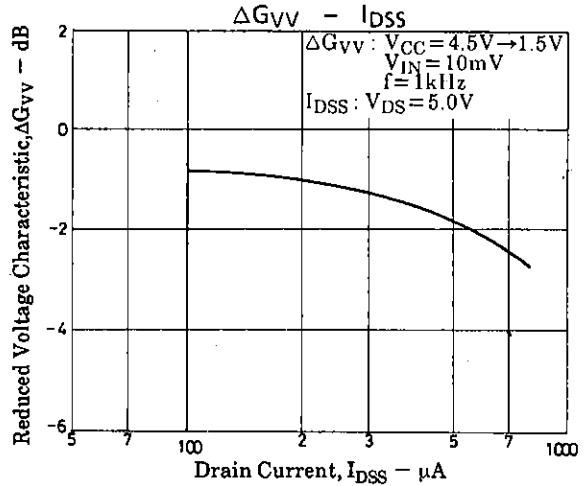
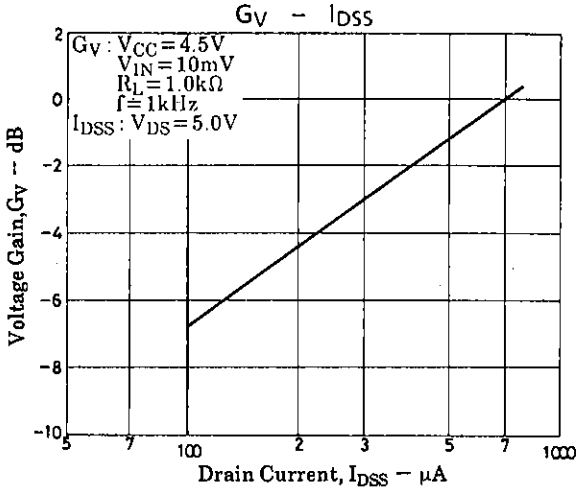
(unit : mm)



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