



TF202

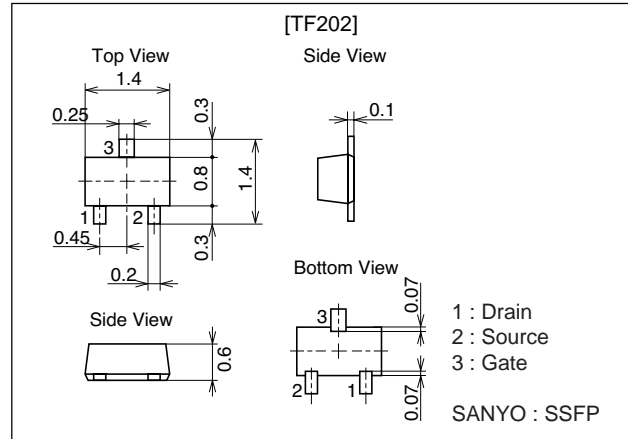
Electret Condenser Microphone Applications

Features

- Especially suited for use in electret condenser microphone.
- Ultrasmall package permitting TF202 applied sets to be made small and slim.
- Excellent voltage characteristics.
- Excellent transient characteristics.
- Adoption of FBET process.

Package Dimensions

unit : mm
2207A



Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Gate-to-Drain Voltage	V _{GD0}		-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)GD0}	I _G =-100μA	-20			V
Cutoff Voltage	V _{GS(off)}	V _{DS} =5V, I _D =1μA	-0.2	-0.6	-1.2	V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =5V, V _{GS} =0	140*		500*	μA
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		3.5		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =5V, V _{GS} =0, f=1MHz		0.65		pF

Continued on next page.

* : The TF202 is classified by I_{DSS} as follows : (unit : μA)

Rank	E4	E5	E6
I _{DSS}	140 to 240	210 to 350	320 to 500

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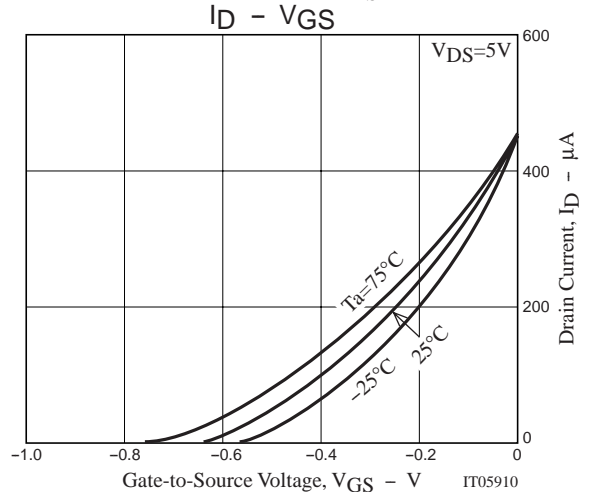
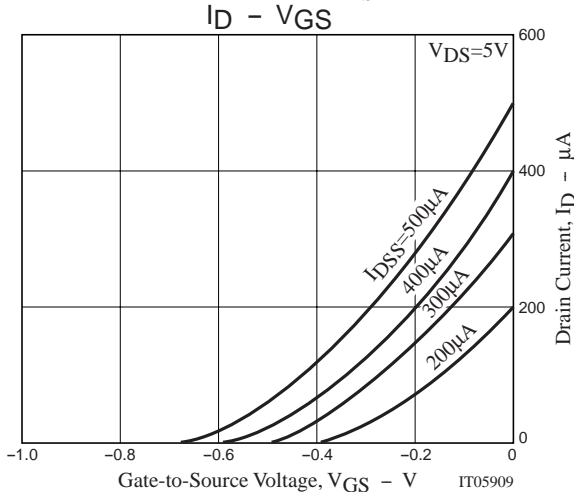
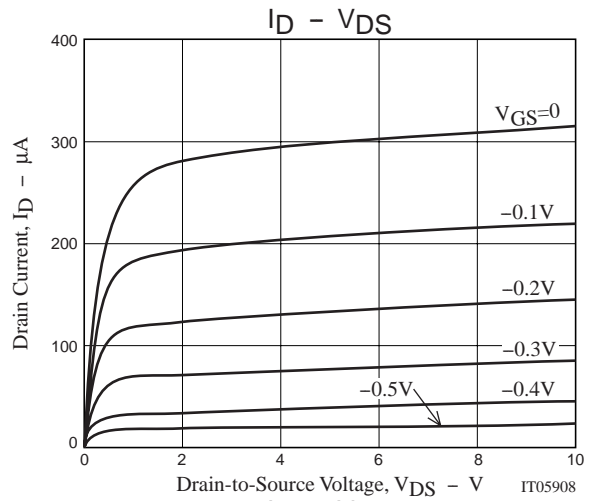
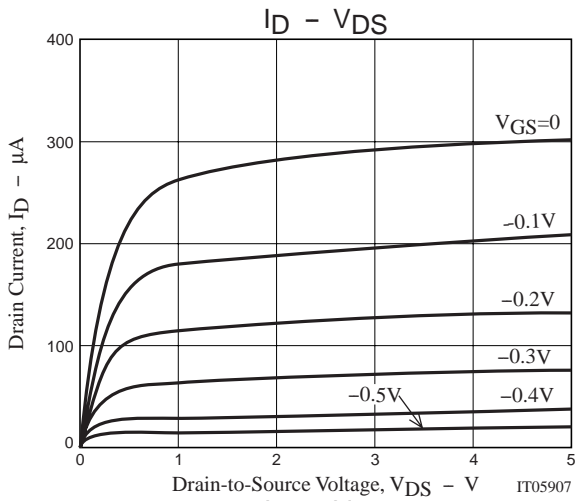
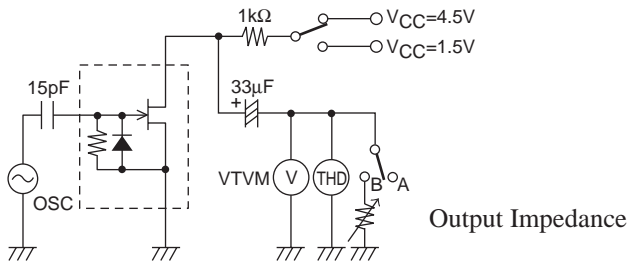
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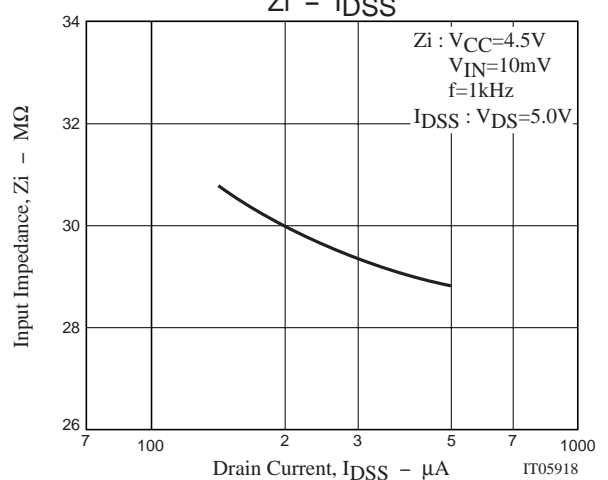
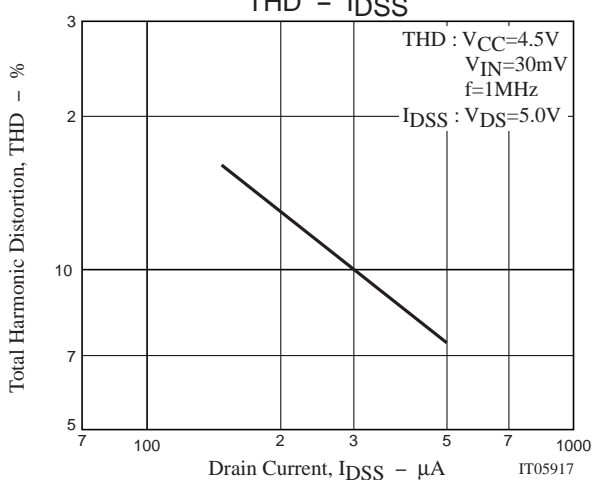
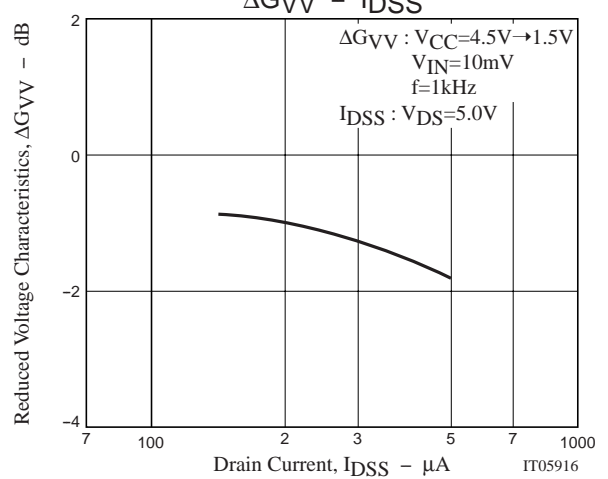
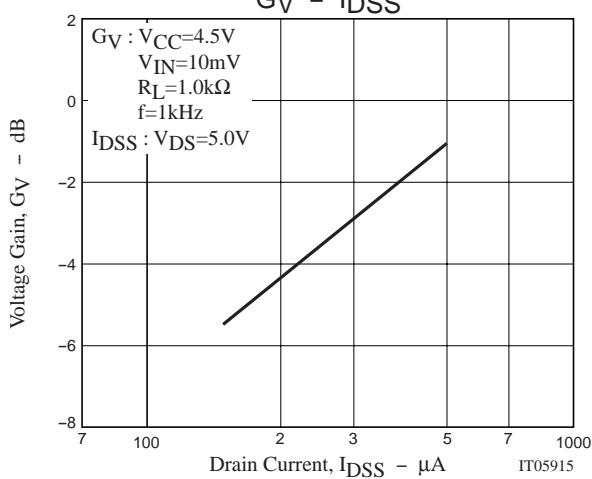
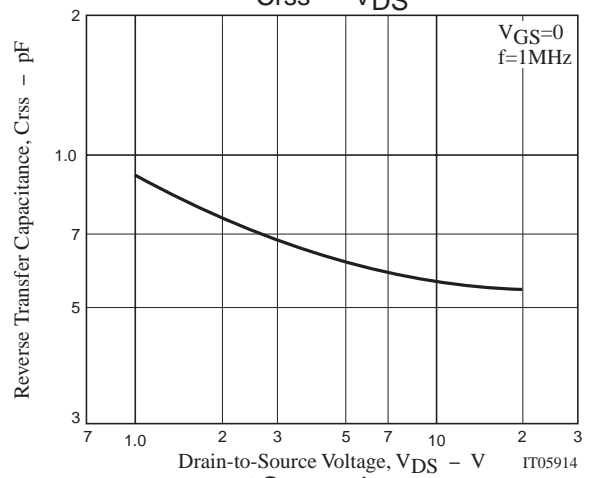
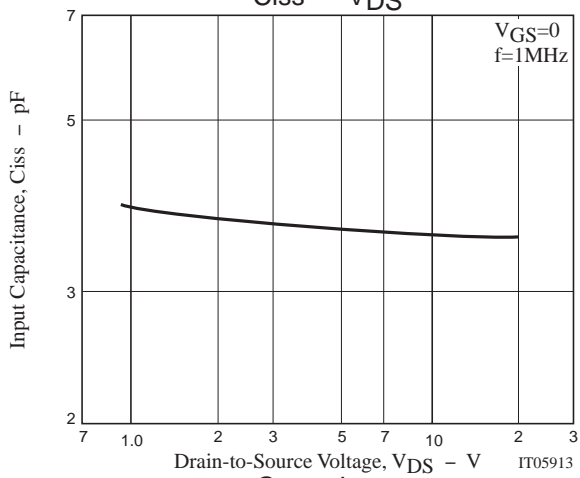
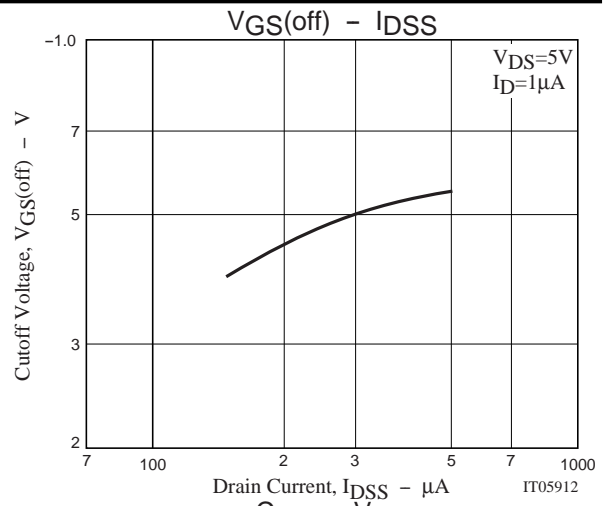
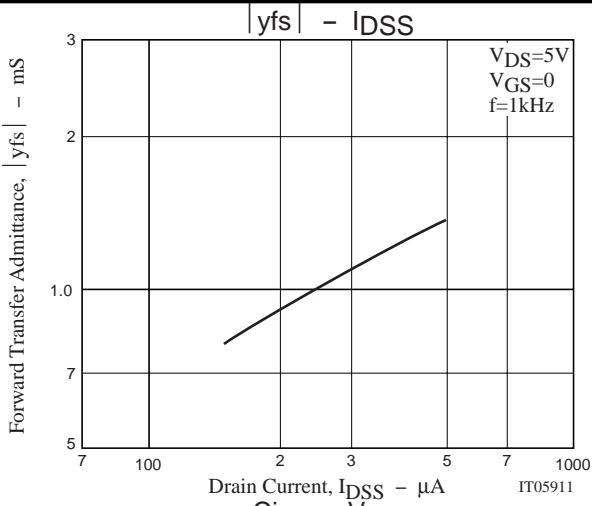
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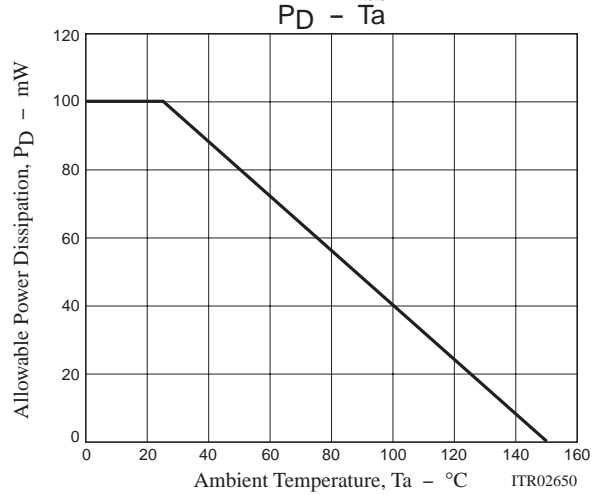
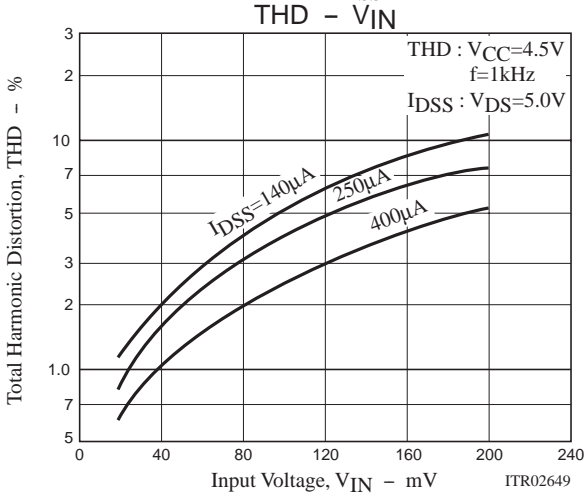
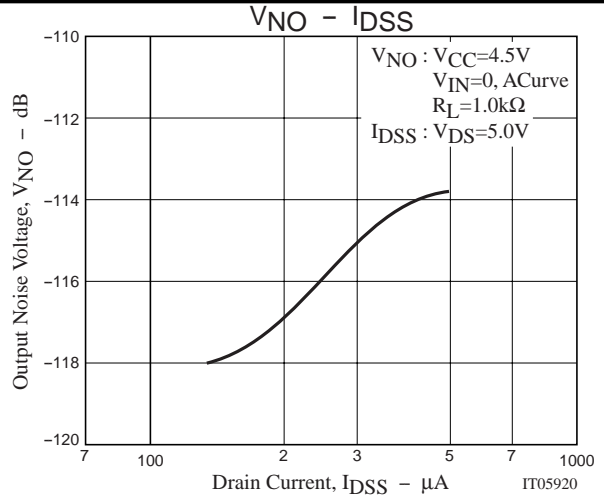
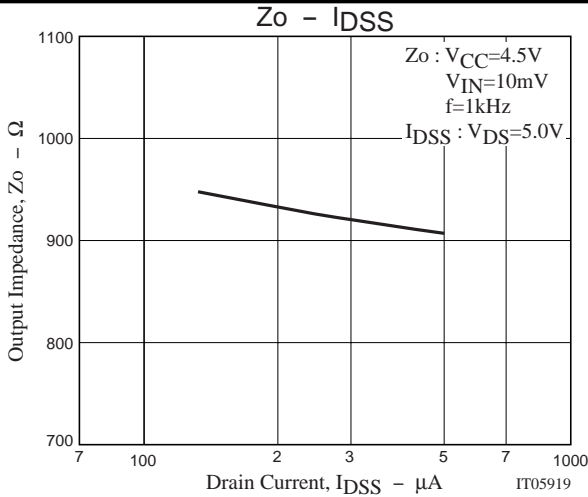
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
[Ta=25°C, VCC=4.5V, RL=1kΩ, Cin=15pF, See specified Test Circuit.]						
Voltage Gain	Gv	VIN=10mV, f=1kHz		-3.0		dB
Reduced Voltage Characteristics	ΔGVV	VIN=10mV, f=1kHz, VCC=4.5→1.5V		-1.2	-3.5	dB
Frequency Characteristics	ΔGvf	f=1kHz to 110Hz			-1.0	dB
Input Resistance	ZIN	f=1kHz	25			mΩ
Output Resistance	ZO	f=1kHz		1000		Ω
Total Harmonic Distortion	THD	VIN=30mV, f=1kHz		1.0		%
Output Noise Voltage	VNO	VIN=0, A curve			-110	dB

Test Circuit

- Voltage gain
- Frequency Characteristics
- Distortion
- Reduced Voltage Characteristics







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