



TF222

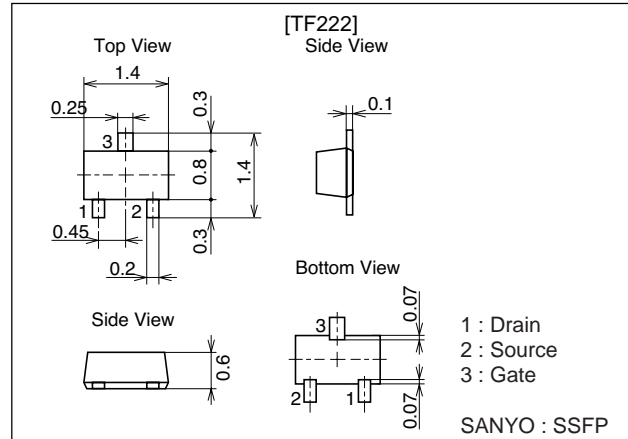
Electret Condenser Microphone Applications

Features

- Especially suited for use in electret condenser microphone.
- Ultrasmall package permitting TF222 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} =2V, I _D =1μA	-0.1		-1.0	V
Drain Current	I _{DSS}	V _{DS} =2V, V _{GS} =0	140*		350*	μA
Forward Transfer Admittance	y _{fs}	V _{DS} =2V, V _{GS} =0, f=1kHz	0.5			mS
Input Capacitance	C _{iss}	V _{DS} =2V, V _{GS} =0, f=1MHz		5.0		pF
Reverse Transfer Capacitance	C _{rss}	V _{DS} =2V, V _{GS} =0, f=1MHz		1.1		pF

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* : The TF222 is classified by I_{DSS} as follows : (unit : μA)

Rank	B4	B5
I _{DSS}	140 to 240	210 to 350

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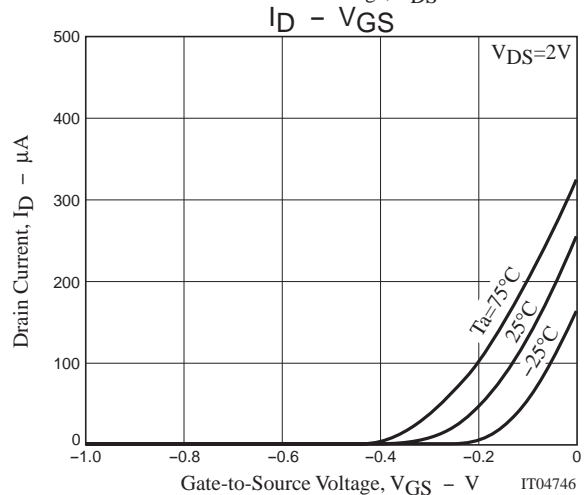
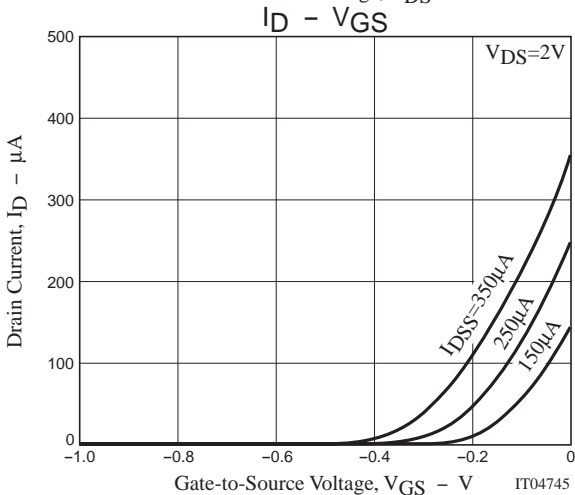
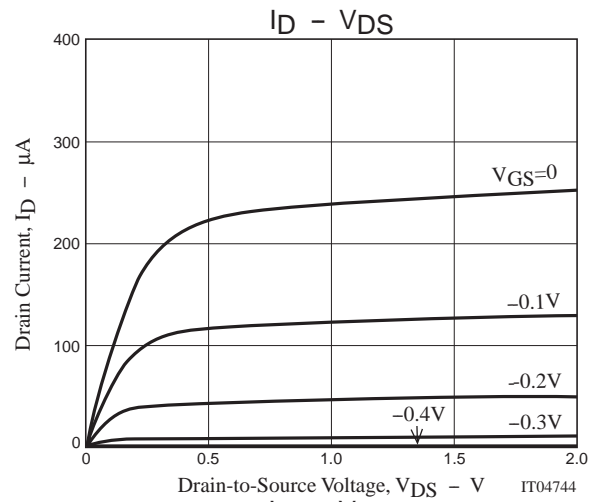
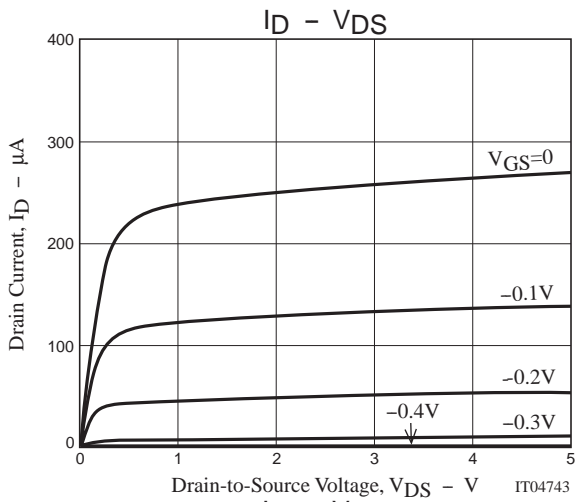
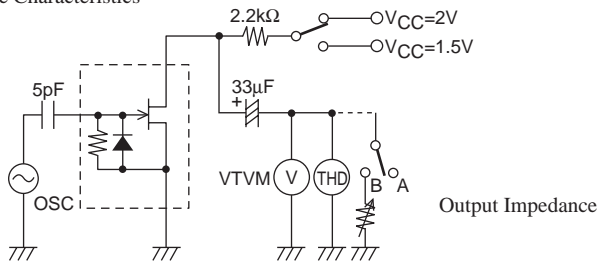
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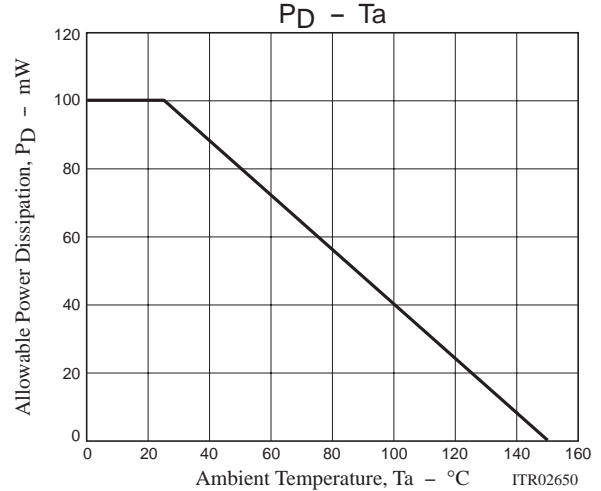
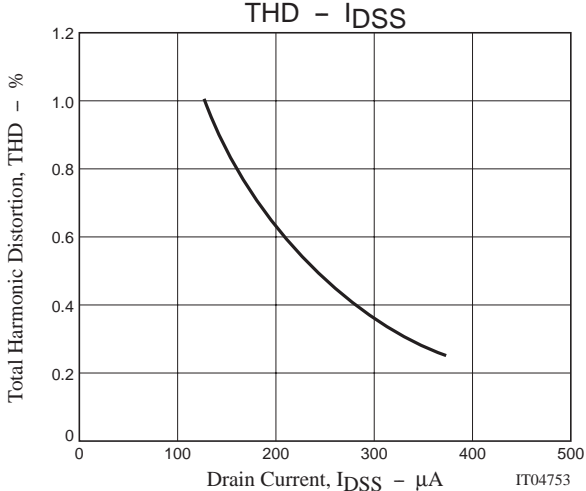
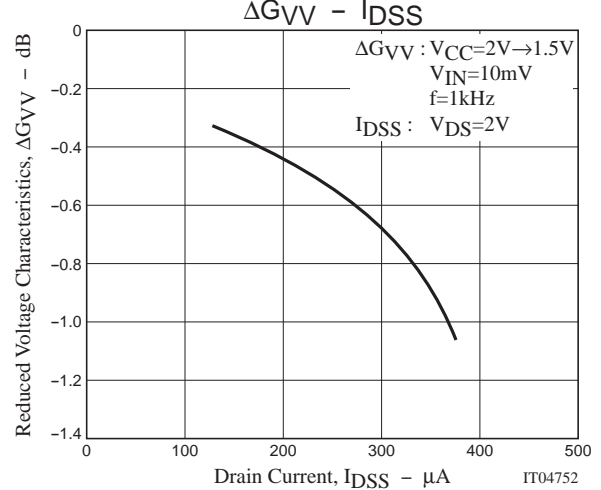
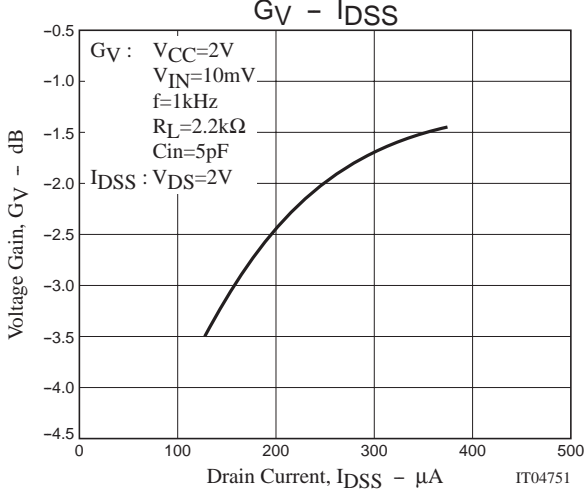
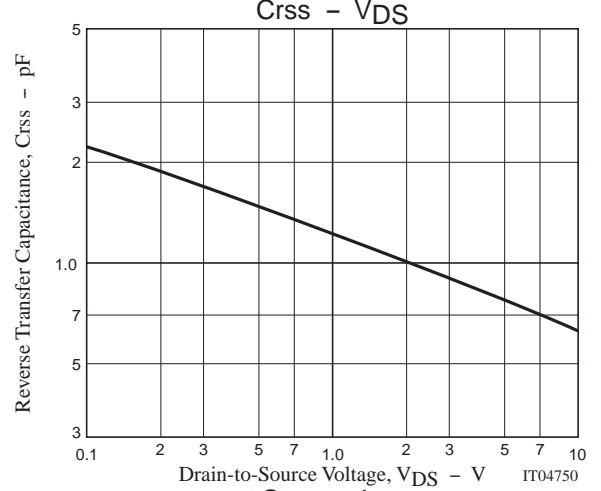
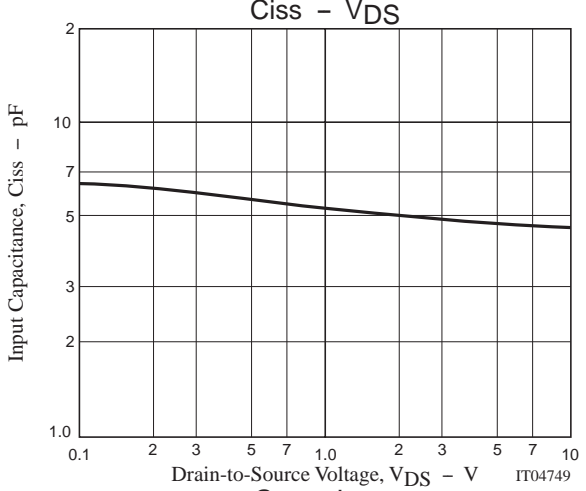
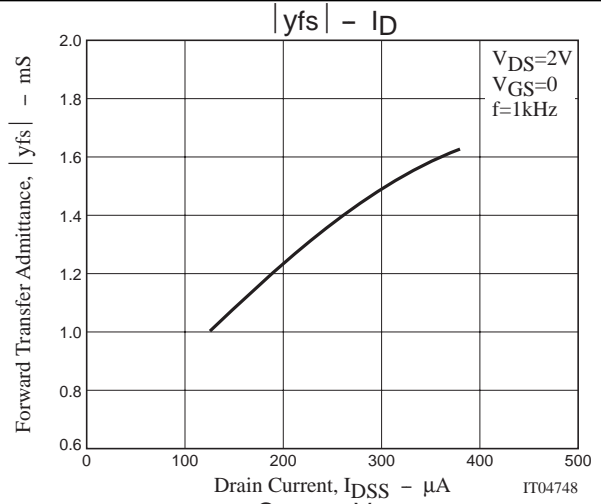
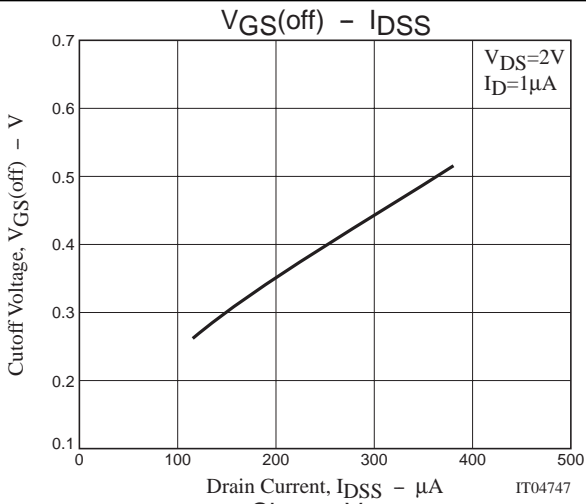
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
[Ta=25°C, VCC=2.0V, RL=2.2kΩ, Cin=5pF, See specified Test Circuit.]						
Voltage Gain	G _V	f=1kHz, V _{IN} =10mV		-2.0		dB
Reduced Voltage Characteristics	ΔG _{VV}	f=1kHz, V _{IN} =10mV, V _{CC} =2→1.5V		-0.6	-2.0	dB
Frequency Characteristics	ΔG _{Vf}	f=1kHz to 110Hz			-1.0	dB
Total Harmonic Distortion	THD	f=1kHz, V _{IN} =30mV		0.7		%
Output Noise Voltage	V _{NO}	V _{IN} =0, A curve			-102	dB

Test Circuit

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





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