

Ordering number : ENA0727

SANYO**SANYO Semiconductors****DATA SHEET**

TF202C — N-channel Silicon Junction FET Electret Condenser Microphone Applications

Features

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

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 =-100μA	-20			V
Cutoff Voltage	V _{GS(off)}	V _{DS} =5V, I _D =1μA	-0.2	-0.6	-1.2	V
Drain Current	I _{DSS}	V _{DS} =5V, V _{GS} =0V	140*		350*	μA

Marking: E

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* : The TF202C is classified by I_{DSS} as follows : (unit : μA)

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

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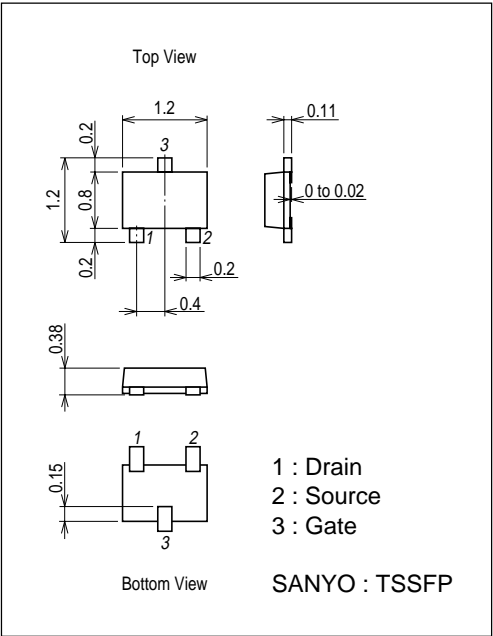
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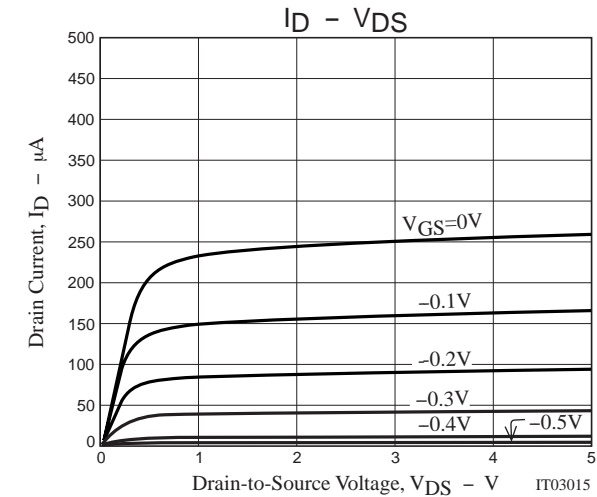
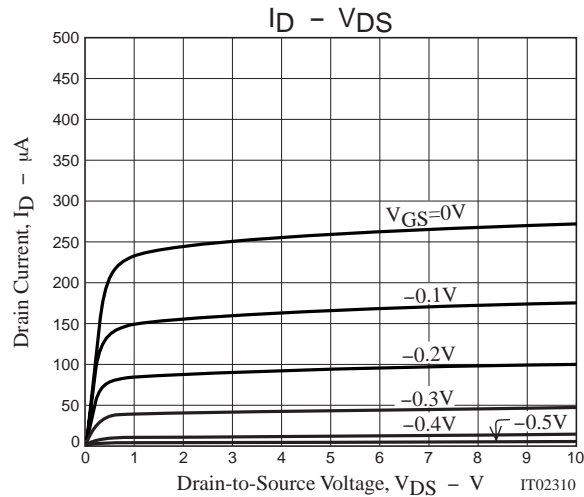
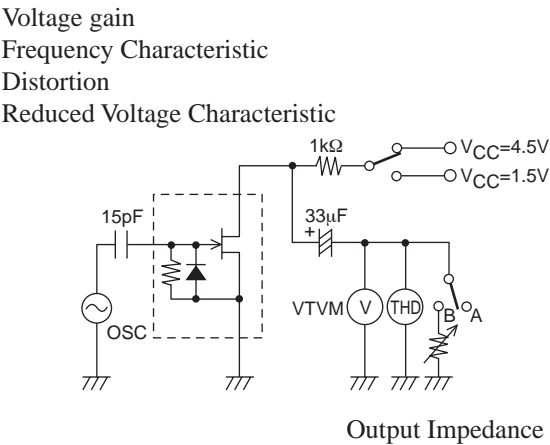
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Forward Transfer Admittance	yfs	VDS=5V, VGS=0V, f=1kHz	0.5	1.2		mS
Input Capacitance	Ciss	VDS=5V, VGS=0V, f=1MHz		3.5		pF
Reverse Transfer Capacitance	Crss	VDS=5V, VGS=0V, f=1MHz		0.65		pF
[Ta=25°C, VCC=4.5V, RL=1kΩ, Cin=15pF, See specified Test Circuit.]						
Voltage Gain	GV	VIN=10mV, f=1kHz		-3.0		dB
Reduced Voltage Characteristic	ΔGVV	VIN=10mV, f=1kHz, VCC=4.5→1.5V		-1.2	-3.5	dB
Frequency Characteristic	ΔGvf	f=1kHz to 110Hz			-1.0	dB
Input Impedance	ZIN	f=1kHz	25			MΩ
Output Impedance	ZO	f=1kHz		1000		Ω
Total Harmonic Distortion	THD	VIN=30mV, f=1kHz		1.0		%
Output Noise Voltage	VNO	VIN=0V, A curve			-110	dB

Package Dimensions

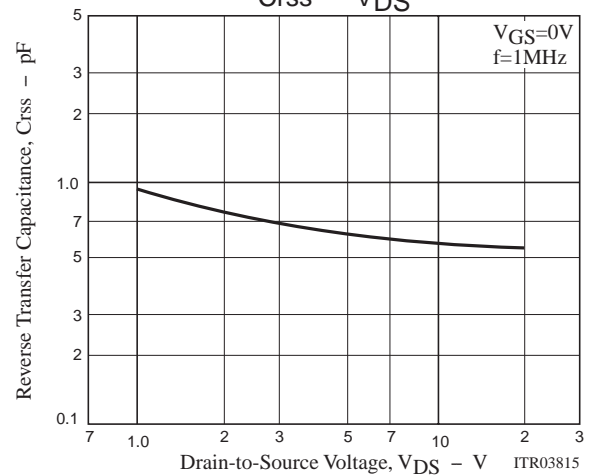
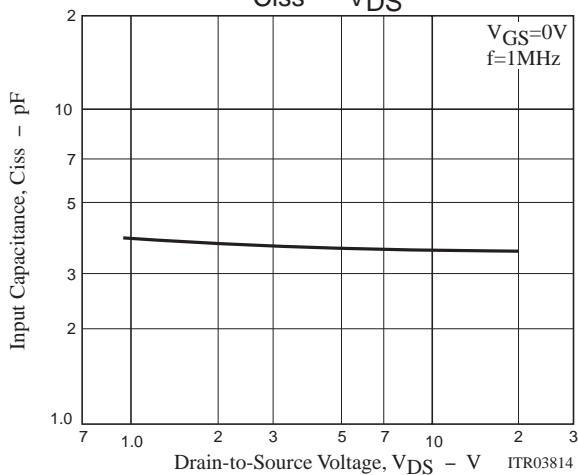
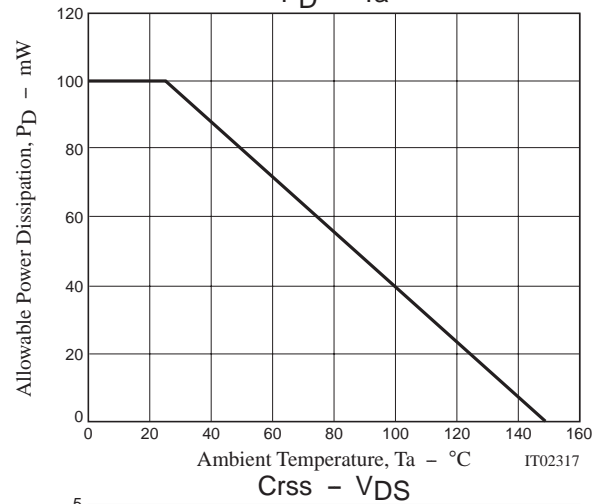
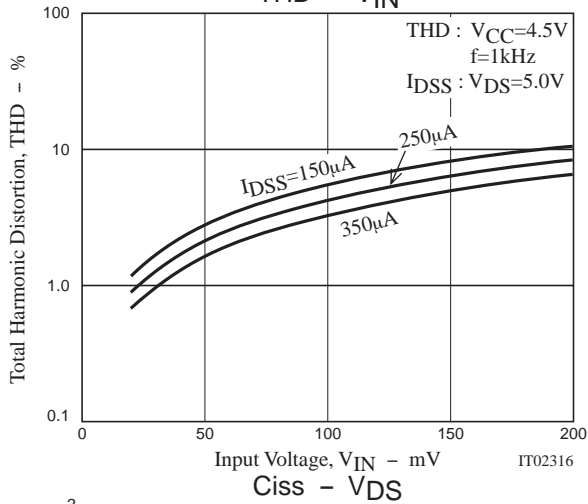
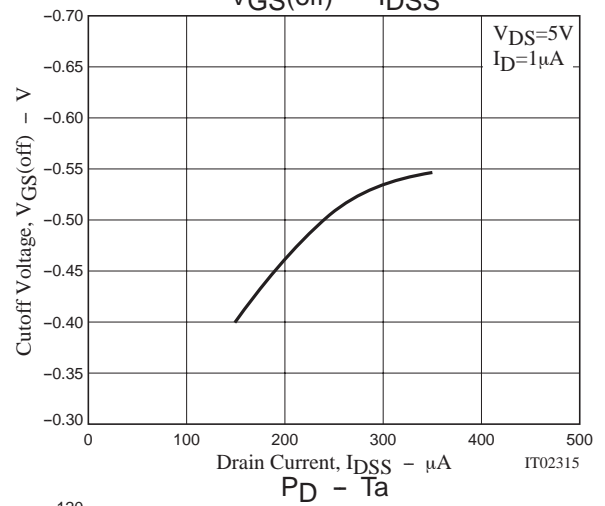
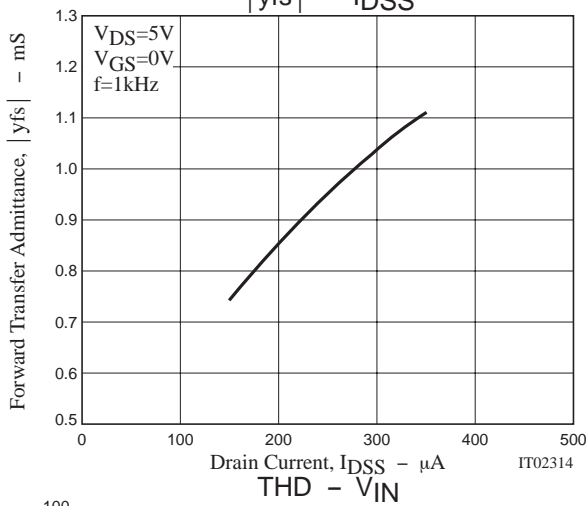
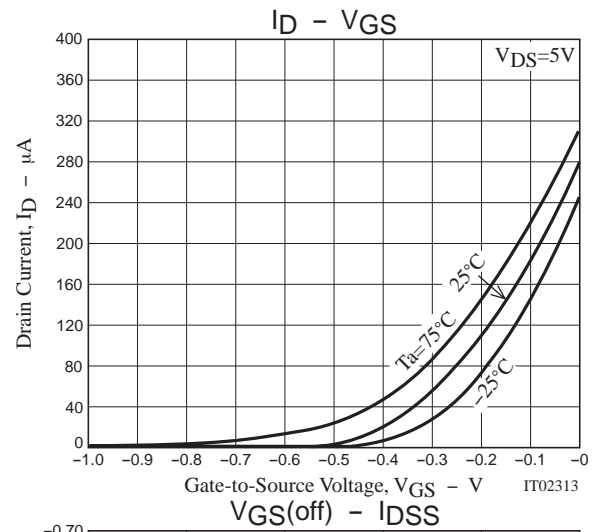
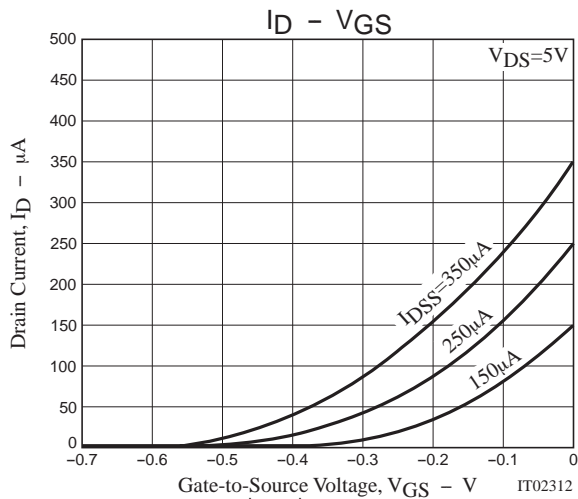
unit : mm (typ)
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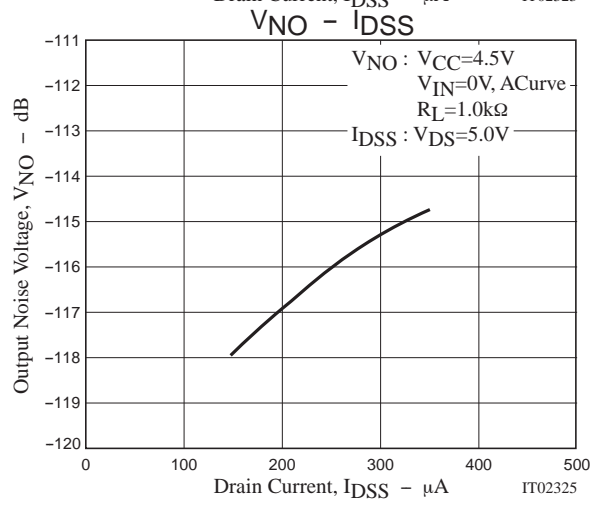
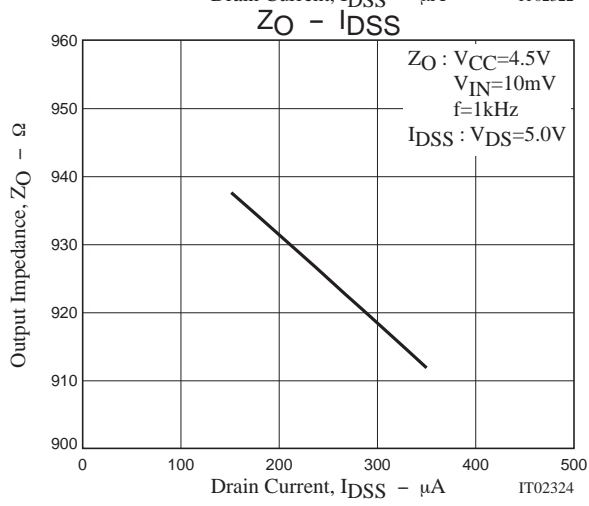
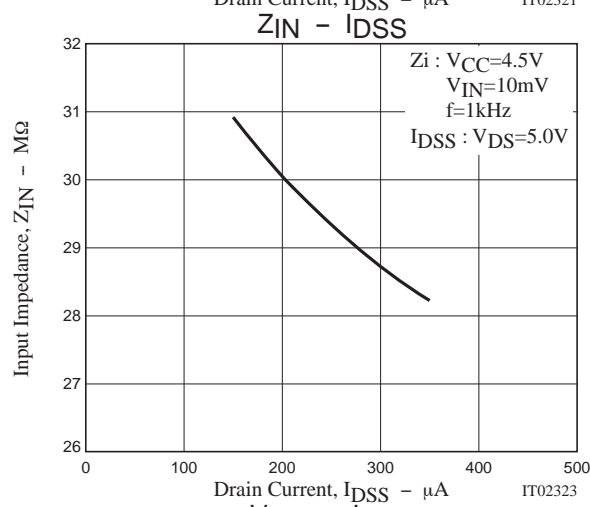
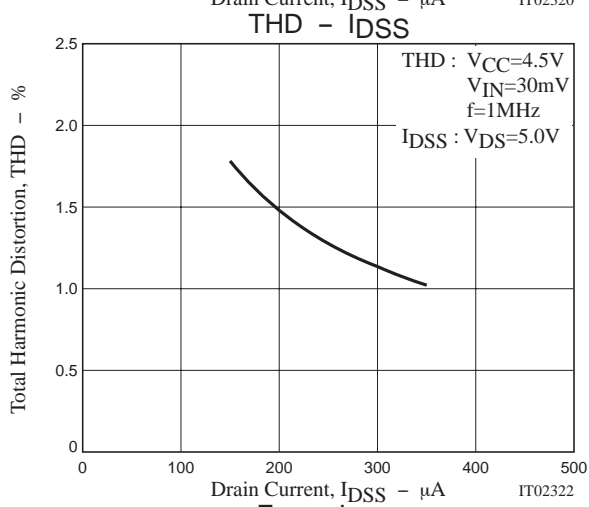
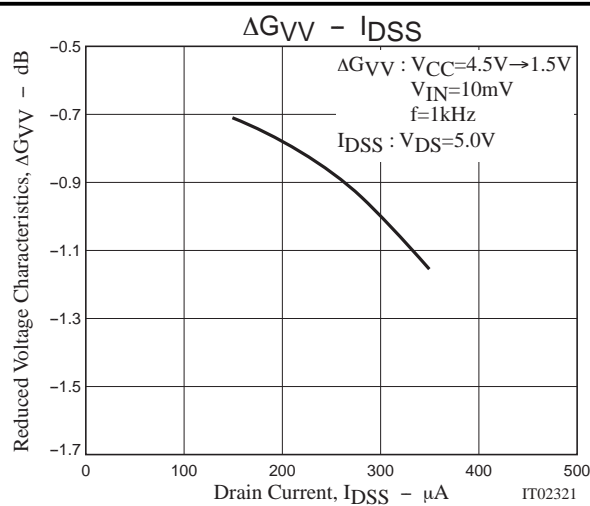
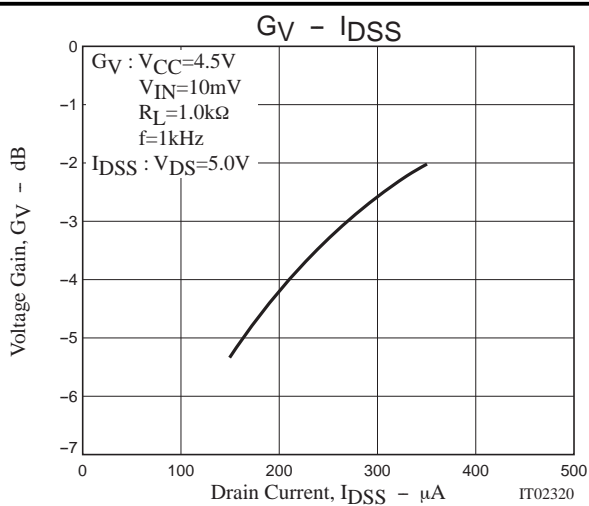
Test Circuit



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