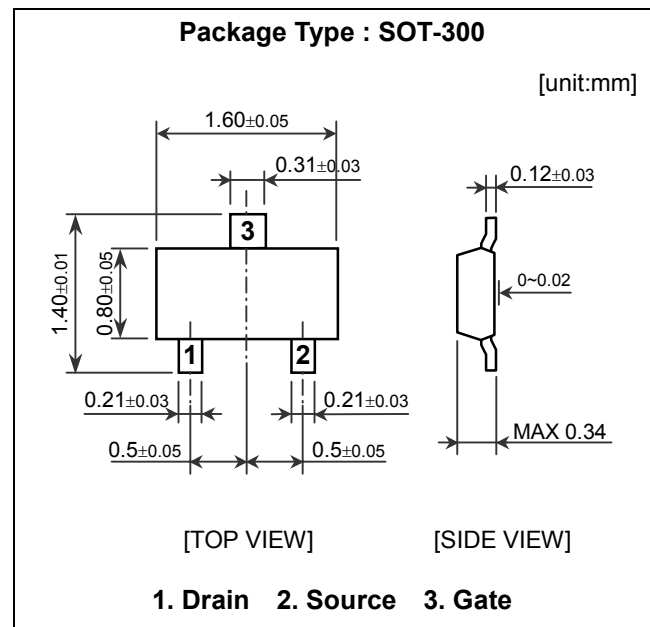


## Features

- Specially suited for use in audio and telephone electret capacitor microphones
- Excellent voltage gain
- Very low noise
- High ESD voltage
- Ultra-small size package

## Applications

- Cellular phones
- Portable audio
- PDAs
- MP3 players



## Absolute Maximum Ratings at Ta = 25 °C

Parameter	Symbol	Ratings	Unit
Gate-to-Drain Voltage	V <sub>GDO</sub>	-20	V
Gate Current	I <sub>G</sub>	10	mA
Drain Current	I <sub>D</sub>	10	mA
Allowable Power Dissipation	P <sub>D</sub>	100	mW
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to +150	°C

## Electrical Characteristics at Ta = 25 °C

Parameter	Symbol	Conditions	Ratings			Unit
			Min	Typ	Max	
Gate-to-Drain Breakdown Voltage	V <sub>(BR)GDO</sub>	I <sub>G</sub> = -100μA	-20			V
Cutoff Voltage	V <sub>GS(off)</sub>	V <sub>DS</sub> = 5V, I <sub>D</sub> = 1μA	-0.2	-0.6	-1.5	V
Zero-Gate Voltage Drain Current	I <sub>DSS</sub>	V <sub>DS</sub> = 5V, V <sub>GS</sub> = 0	70*		430*	μA
Forward Transfer Admittance	y <sub>fs</sub>	V <sub>DS</sub> = 5V, V <sub>GS</sub> = 0, f = 1kHz	0.4	1.2		mS
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 5V, V <sub>GS</sub> = 0, f = 1MHz		3.5		pF
Reverse Transfer Capacitance	C <sub>rss</sub>	V <sub>DS</sub> = 5V, V <sub>GS</sub> = 0, f = 1MHz		0.8		pF

\* The RJN1163 is classified by I<sub>DSS</sub> as follows

Classification	A1	A2	B	C	D
I <sub>DSS</sub> (μA)	70~120	100~170	150~270	210~350	320~430

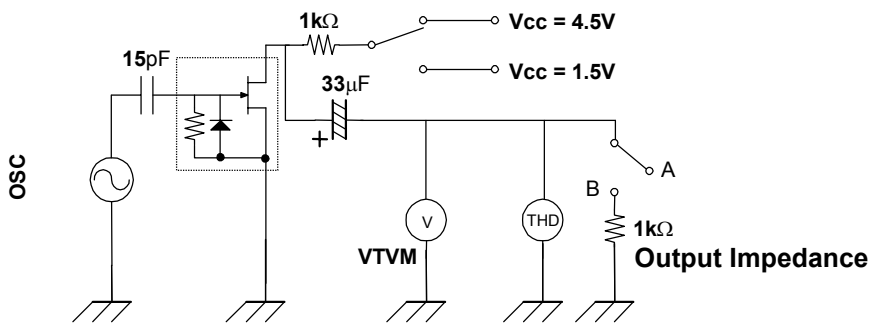
# RJN1163

## Electrical Characteristics

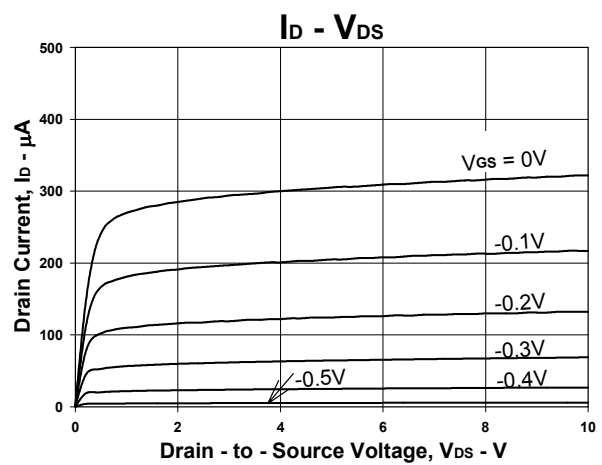
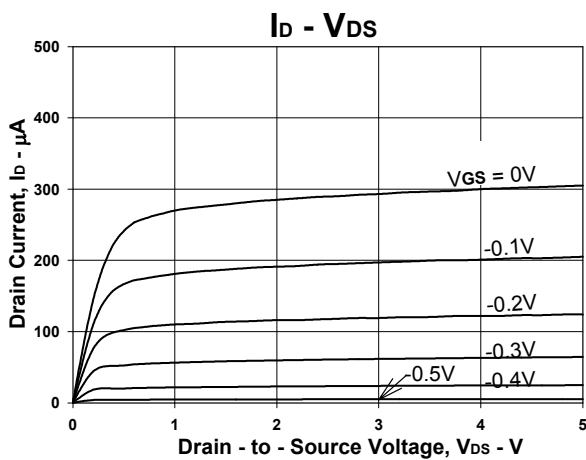
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
[Ta = 25 °C, VCC = 4.5V, RL = 1kΩ, CIN = 15pF, See Specified Test Circuit.]						
Voltage Gain	Gv	VIN = 10 mV, f = 1kHz		-3.0		dB
Reduced Voltage Characteristics	ΔGVV	VIN = 10 mV, VCC = 4.5 → 1.5V		-1.2	-3.5	dB
Frequency Characteristics	ΔGVf	f = 1kHz to 110Hz			-1.0	dB
Input Impedance	ZIN	f = 1kHz	30			MΩ
Output Impedance	ZO	f = 1kHz			700	Ω
Total Harmonic Distortion	THD	VIN = 10mV, f = 1kHz		1.0		%
Output Noise Voltage	VNO	VIN = 0, A curve			-110	dB

## Test Circuit

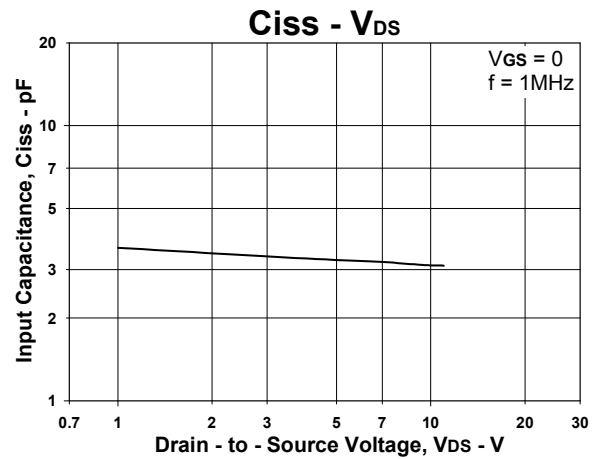
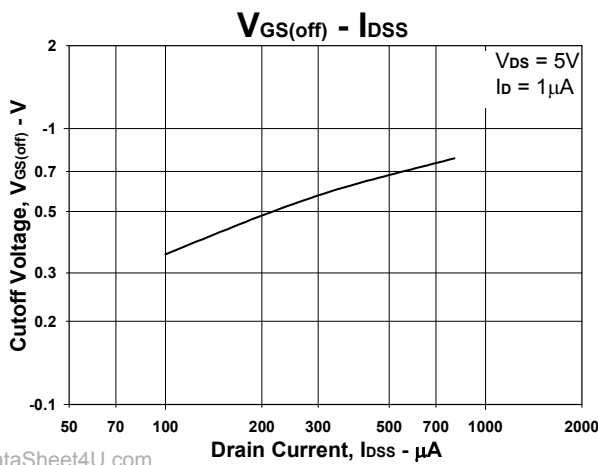
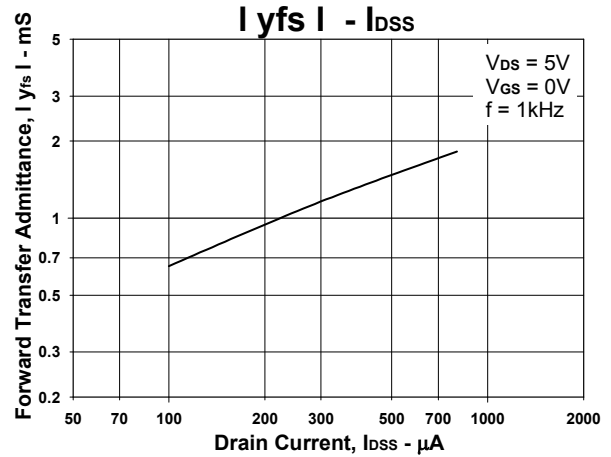
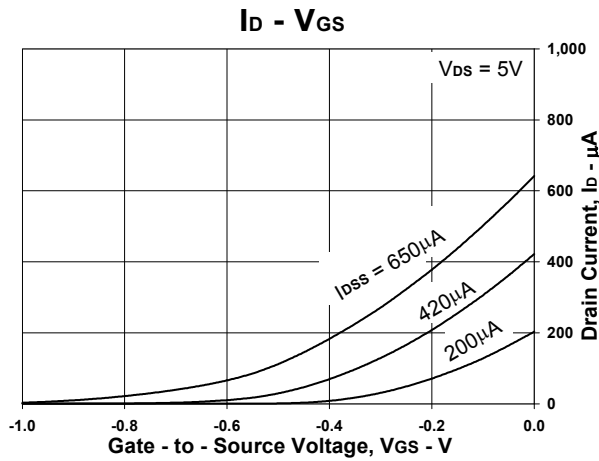
- Voltage Gain
- Frequency Characteristics
- Distortion
- Reduced Voltage Characteristics



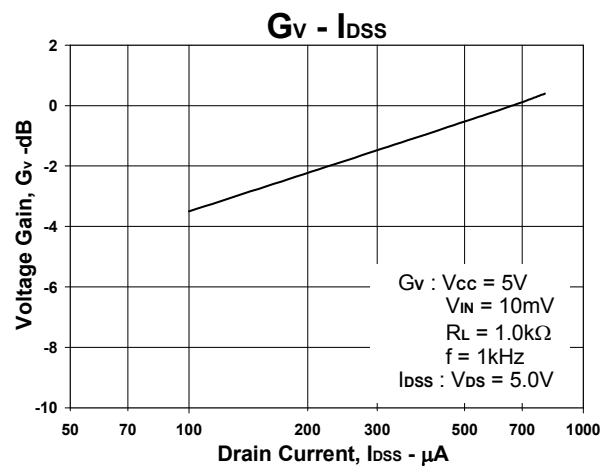
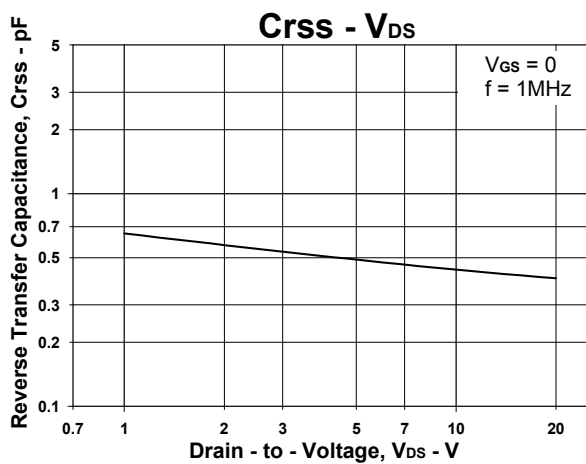
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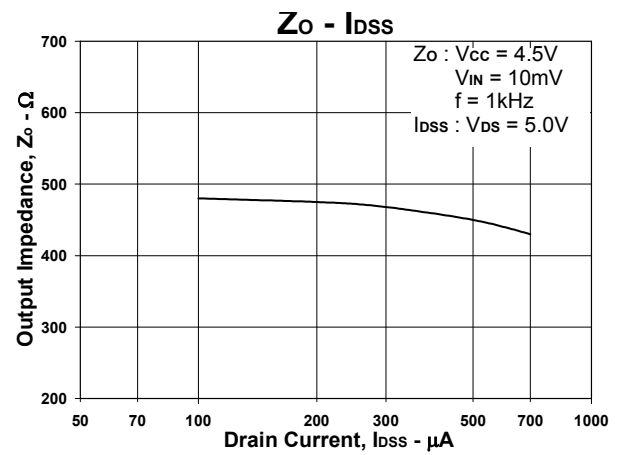
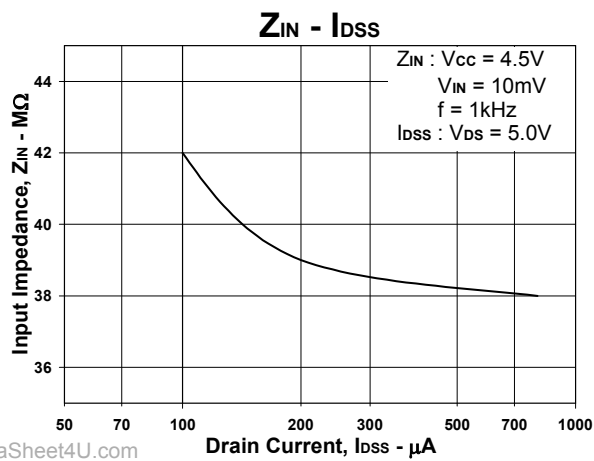
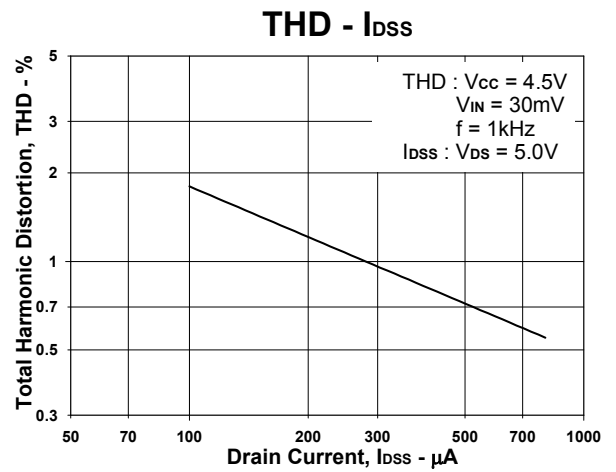
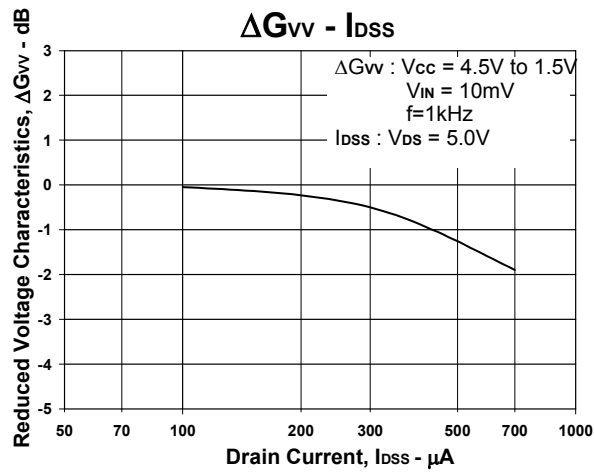
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