

P-Channel JFETs

2N5460
SST5460
2N5461
SST5461
2N5462
SST5462

PRODUCT SUMMARY				
Part Number	$V_{GS(off)}$ (V)	$V_{(BR)GSS}$ Min (V)	g_{fs} Min (mS)	I_{DSS} Min (mA)
2N/SST5460	0.75 to 6	40	1	-1
2N/SST5461	1 to 7.5	40	1.5	-2
2N/SST5462	1.8 to 9	40	2	-4

FEATURES

- High Input Impedance
- Very Low Noise
- High Gain: $A_V = 80$ @ 20 μ A
- Low Capacitance: 1.2 pF Typical

BENEFITS

- Low Signal Loss/System Error
- High System Sensitivity
- High-Quality Low-Level Signal Amplification

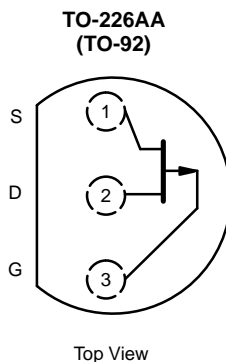
APPLICATIONS

- Low-Current, Low-Voltage Amplifiers
- High-Side Switching
- Ultrahigh Input Impedance Pre-Amplifiers

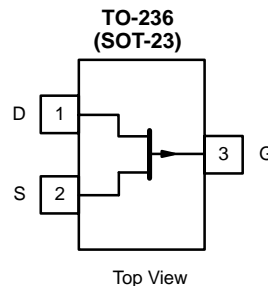
DESCRIPTION

The 2N/SST5460 series are p-channel JFETs designed to provide all-around performance in a wide range of amplifier and analog switch applications.

The 2N series, TO-226AA (TO-92), and SST series, TO-236 (SOT-23), plastic packages provide low cost options, and are available in tape-and-reel for automated assembly, (see Packaging Information).



2N5460
2N5461
2N5462



SST5460 (B0)*
SST5461 (B1)*
SST5462 (B2)*

*Marking Code for TO-236

ABSOLUTE MAXIMUM RATINGS

Gate-Drain Voltage	40 V
Gate-Source Voltage	40 V
Gate Current	-10 mA
Storage Temperature	-65 to 150°C
Operating Junction Temperature	-55 to 150°C

Lead Temperature ($1/16$ " from case for 10 sec.)	300°C
Power Dissipation ^a	350 mW

Notes

a. Derate 2.8 mW/°C above 25°C



SPECIFICATIONS (T _A = 25 °C UNLESS OTHERWISE NOTED)													
Parameter	Symbol	Test Conditions	Typ ^a	Limits						Unit			
				2N/SST5460		2N/SST5461		2N/SST5462					
				Min	Max	Min	Max	Min	Max				
Static													
Gate-Source Breakdown Voltage	V _{(BR)GSS}	I _G = 10 μA, V _{DS} = 0 V	55	40		40		40		V			
Gate-Source Cutoff Voltage	V _{GS(off)}	V _{DS} = -15 V, I _D = -1 μA		0.75	6	1	7.5	1.8	9				
Saturation Drain Current ^b	I _{DSS}	V _{DS} = -15 V, V _{GS} = 0 V		-1	-5	-2	-9	-4	-16	mA			
Gate Reverse Current	I _{GSS}	V _{GS} = 20 V, V _{DS} = 0 V	0.003		5		5		5	nA			
		T _A = 100 °C	0.0003		1		1		1	μA			
Gate Operating Current	I _G	V _{DG} = -20 V, I _D = -0.1 mA	3							pA			
Drain Cutoff Current	I _{D(off)}	V _{DS} = -15 V, V _{GS} = 10 V	-5										
Gate-Source Voltage	V _{GS}	V _{DS} = -15 V	I _D = -0.1 mA	1.3	0.5	4							
			I _D = -0.2 mA	2.3			0.8	4.5					
			I _D = -0.4 mA	3.8					1.5	6			
Gate-Source Forward Voltage	V _{GS(F)}	I _G = -1 mA, V _{DS} = 0 V	-0.7										
Dynamic													
Common-Source Forward Transconductance	g _{fs}	V _{DS} = -15 V, V _{GS} = 0 V f = 1 kHz		1	4	1.5	5	2	6	mS			
Common-Source Output Conductance	g _{os}				75		75		75	μS			
Common-Source Reverse Transfer Capacitance	C _{iss}	V _{DS} = -15 V, V _{GS} = 0 V f = 1 MHz	2N	4.5		7		7		7	pF		
			SST	4.5									
Common-Source Reverse Transfer Capacitance	C _{rss}			1.2									
			2N	1.5		2		2		2			
Common-Source Output Capacitance	C _{oss}			1.5									
			SST	1.5									
Equivalent Input Noise Voltage	ē _n	V _{DS} = -15 V, V _{GS} = 0 V f = 100 Hz	2N	15		115		115		115	nV/ √Hz		
			SST	15									
Noise Figure	NF		V _{DS} = -15 V, V _{GS} = 0 V f = 100 Hz, R _G = 1 MΩ BW = 1 Hz	2N	0.2		2.5		2.5			2.5	dB
				SST	0.2								

Notes

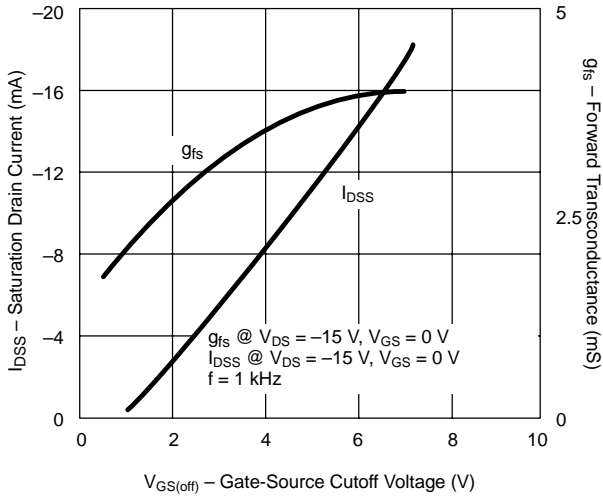
- a. Typical values are for DESIGN AID ONLY, not guaranteed nor subject to production testing.
- b. Pulse test: PW ≤ 300 μs duty cycle ≤ 2%.

PSCIB

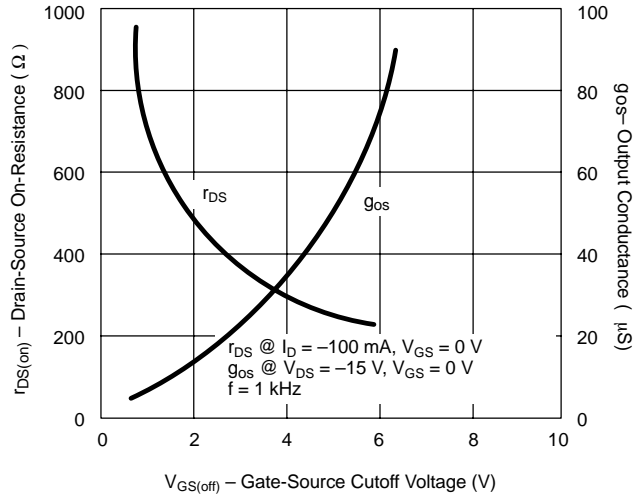


TYPICAL CHARACTERISTICS (T_A = 25°C UNLESS OTHERWISE NOTED)

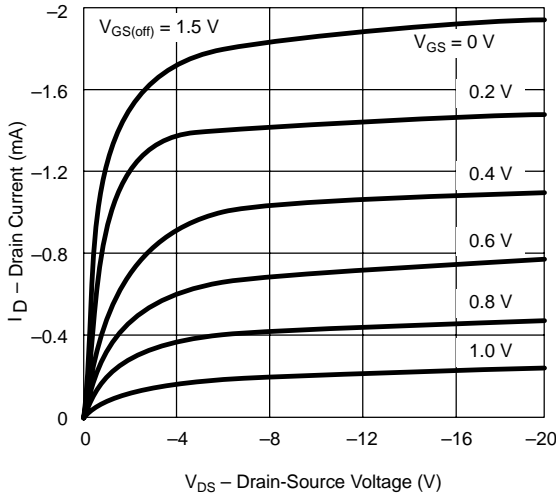
Drain Current and Transconductance vs. Gate-Source Cutoff Voltage



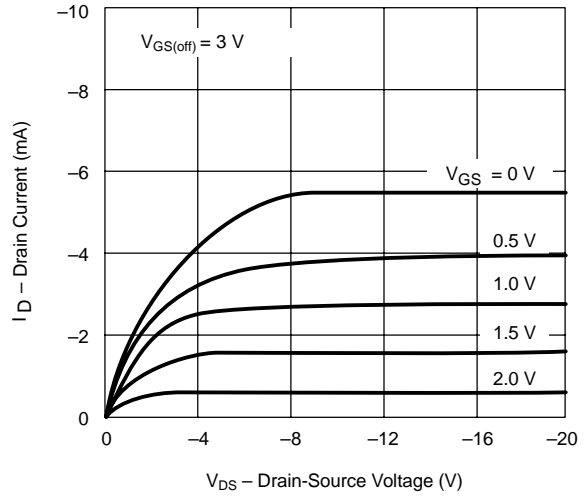
On-Resistance and Output Conductance vs. Gate-Source Cutoff Voltage



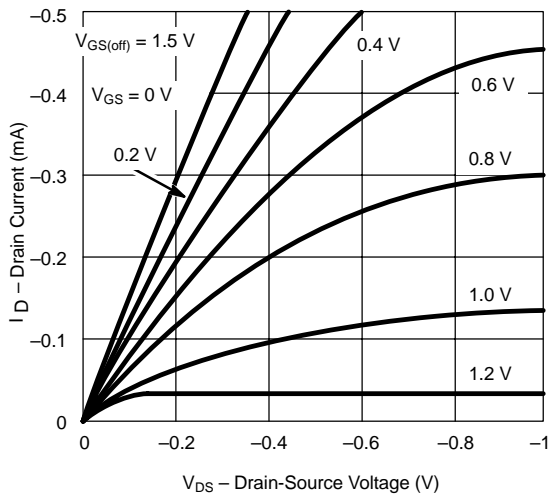
Output Characteristics



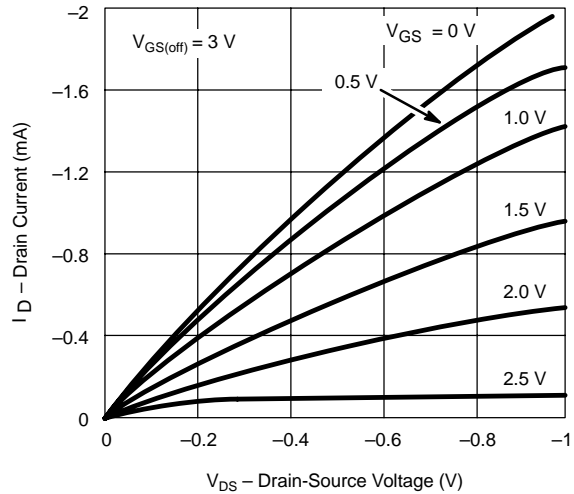
Output Characteristics



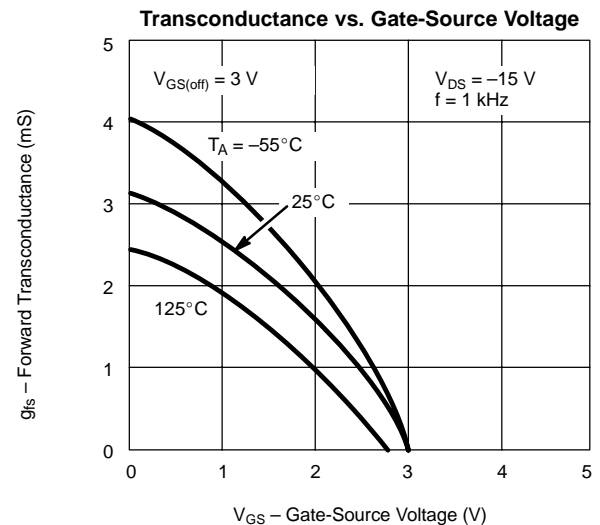
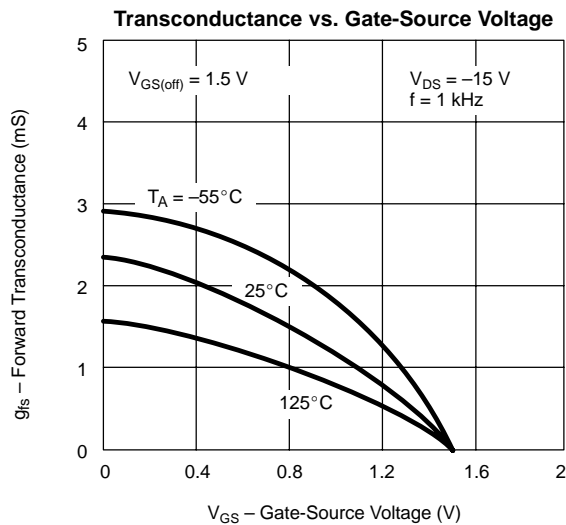
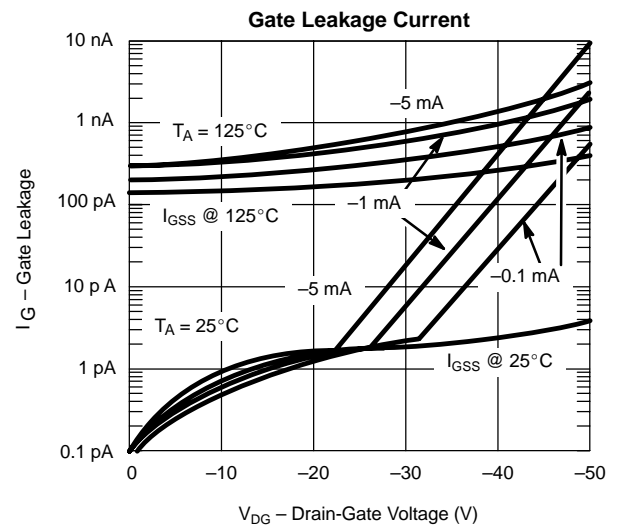
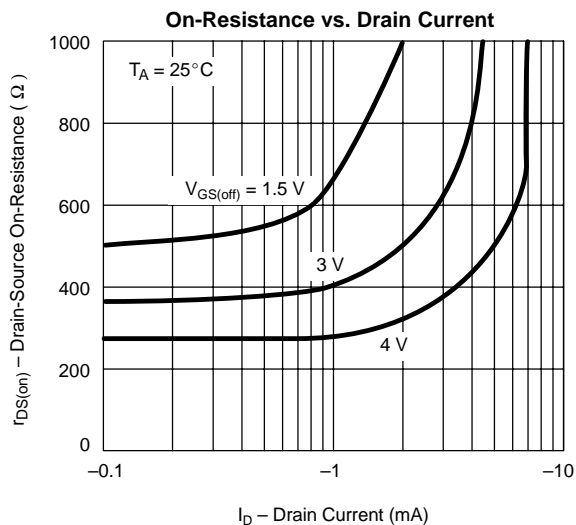
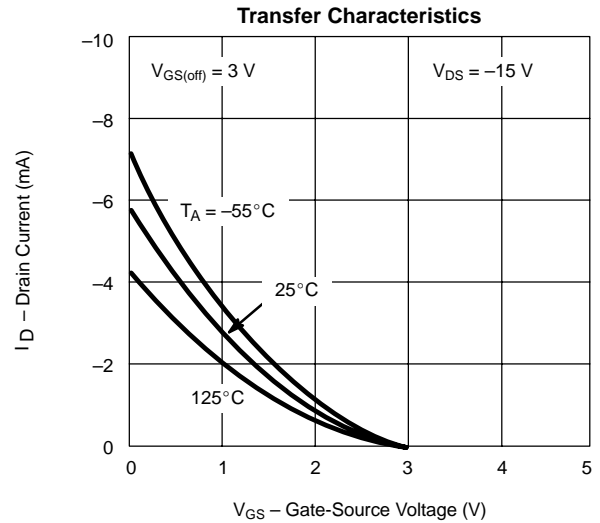
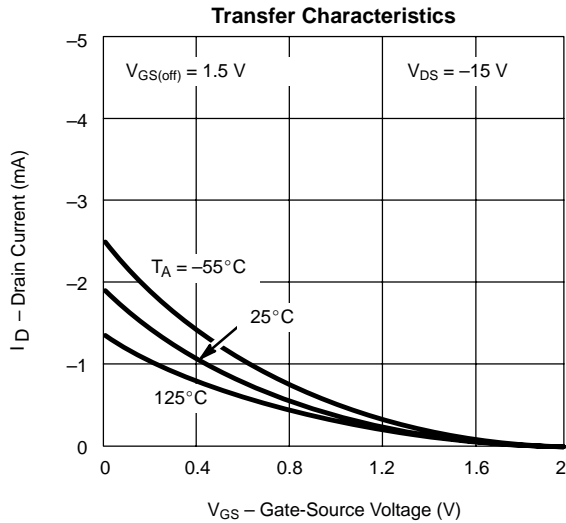
Output Characteristics



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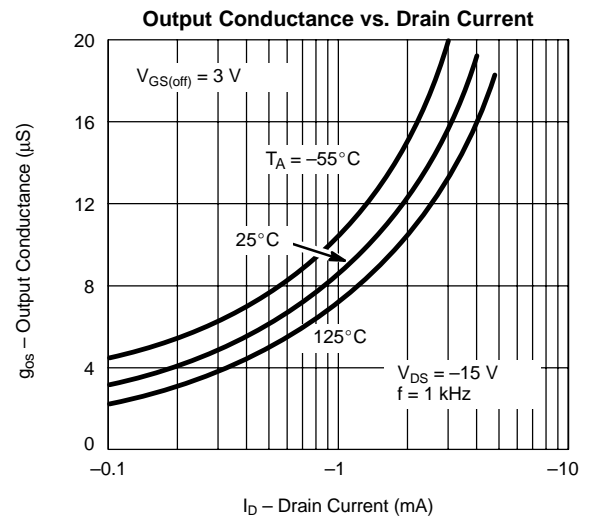
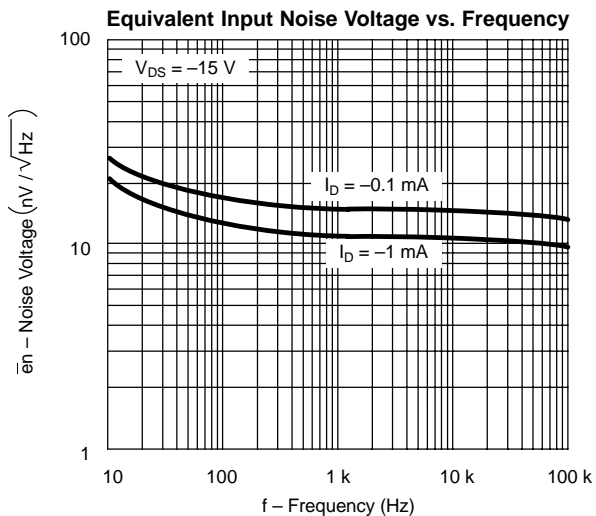
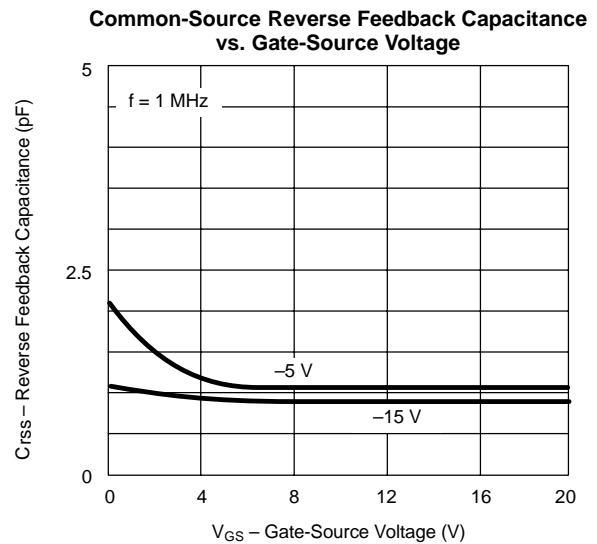
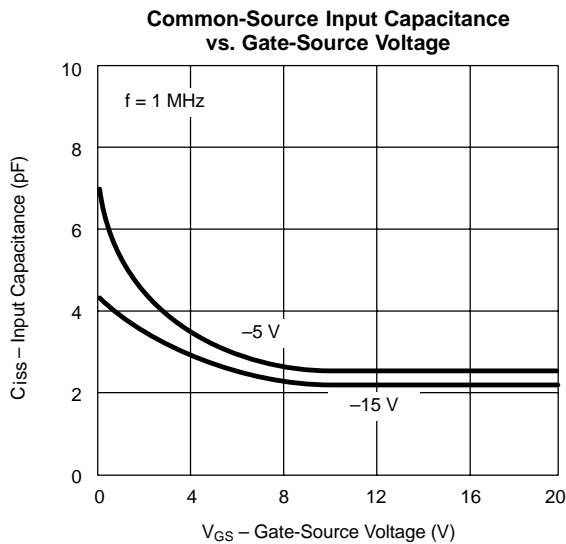
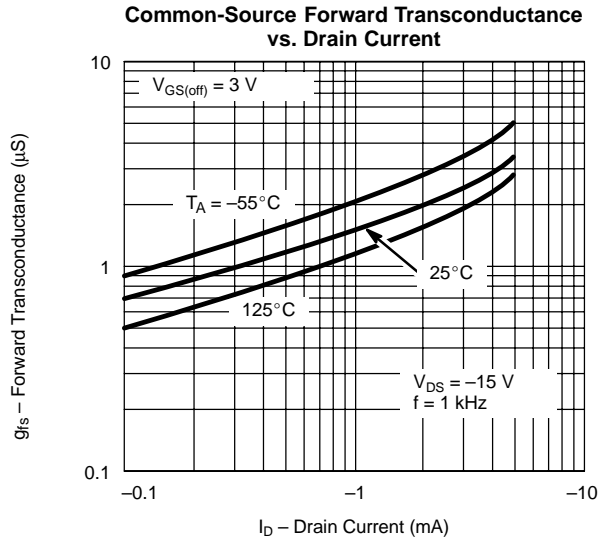
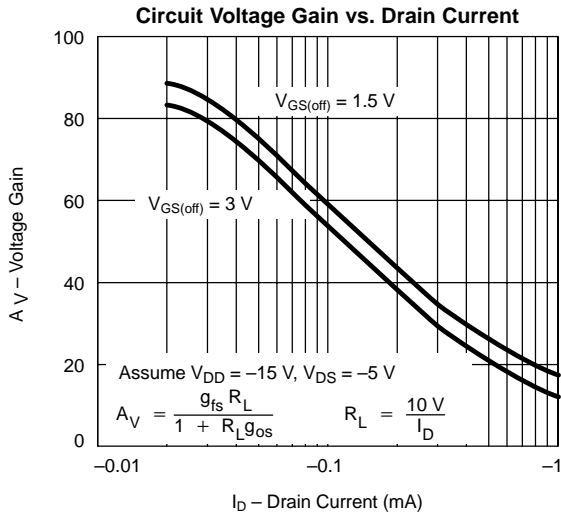


TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)





TYPICAL CHARACTERISTICS (T_A = 25°C UNLESS OTHERWISE NOTED)





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