



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 μA
- Low Capacitance: 1.2 pF Typical

BENEFITS

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

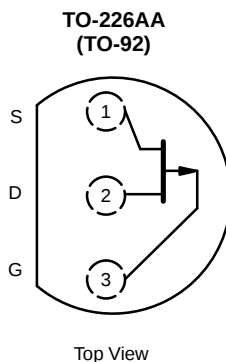
APPLICATIONS

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

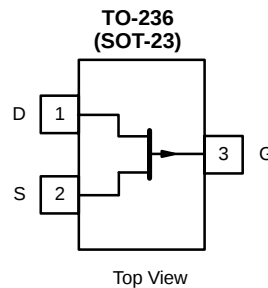
DESCRIPTION

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

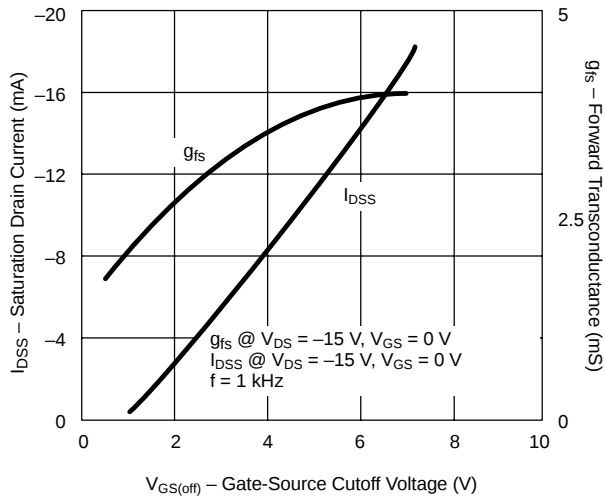
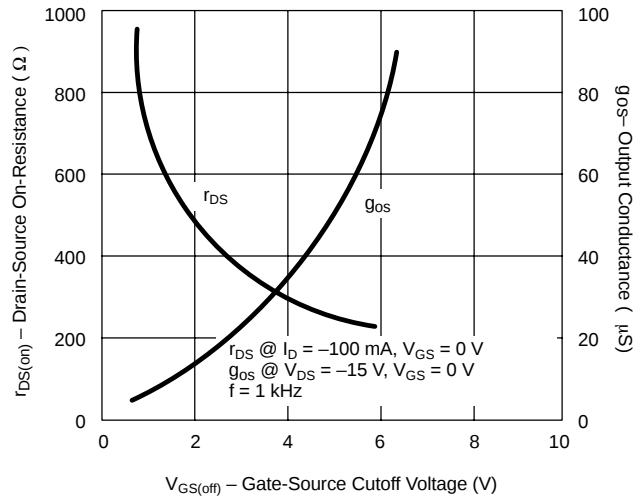
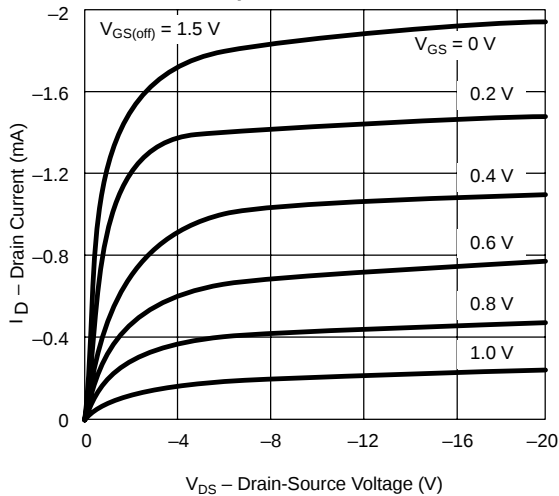
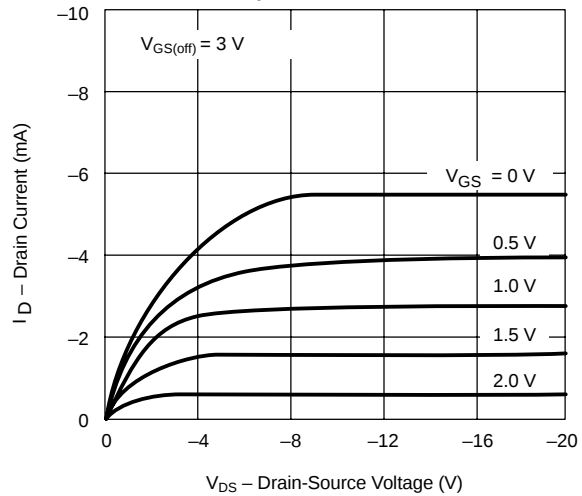
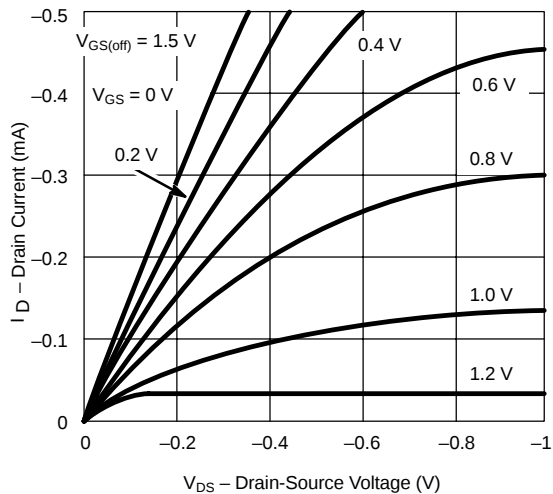
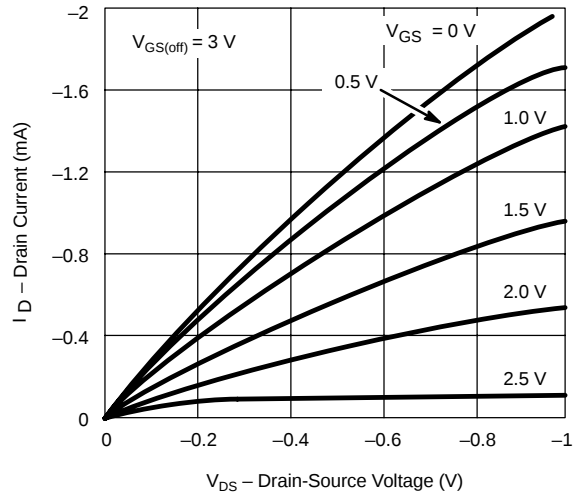
SPECIFICATIONS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

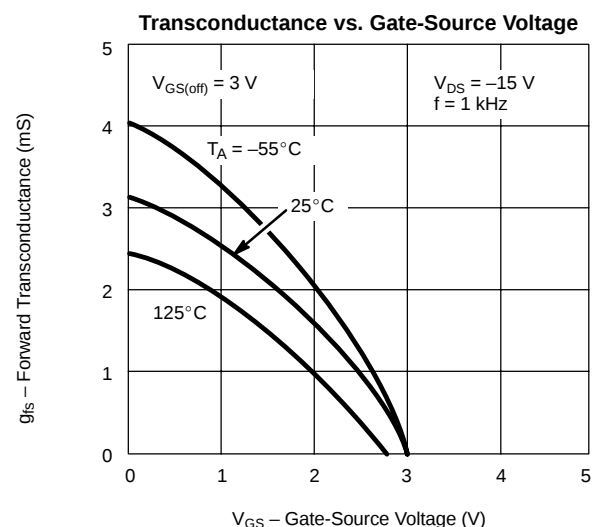
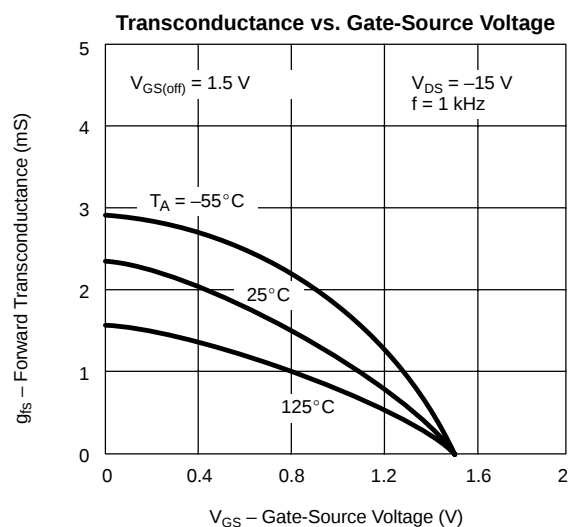
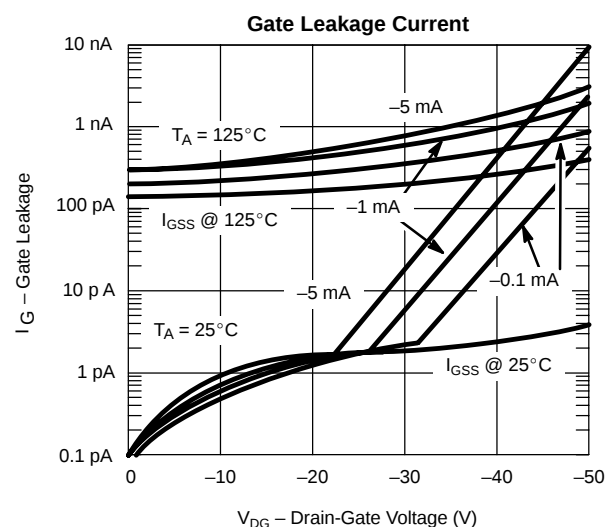
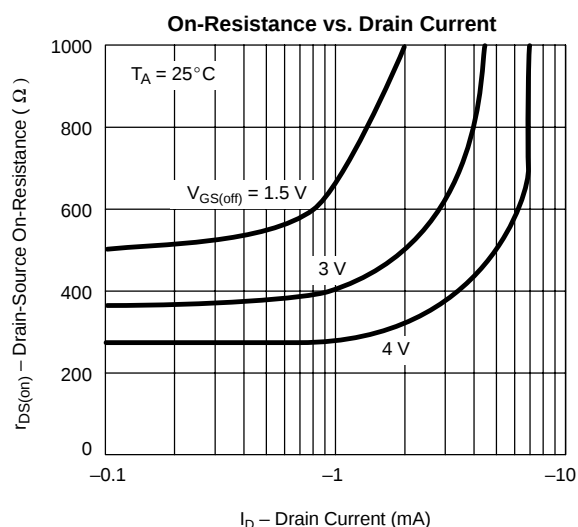
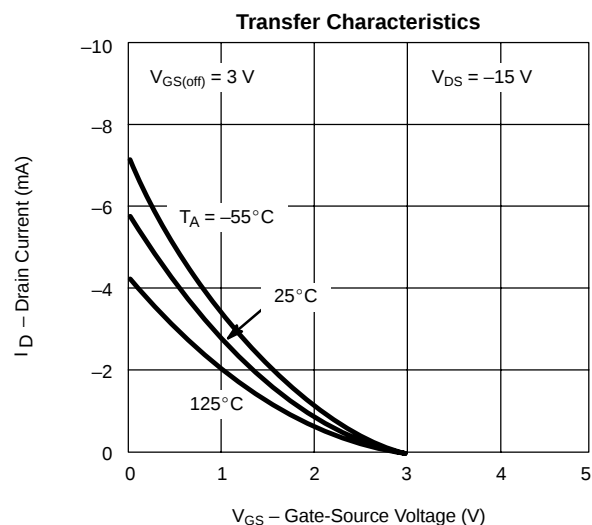
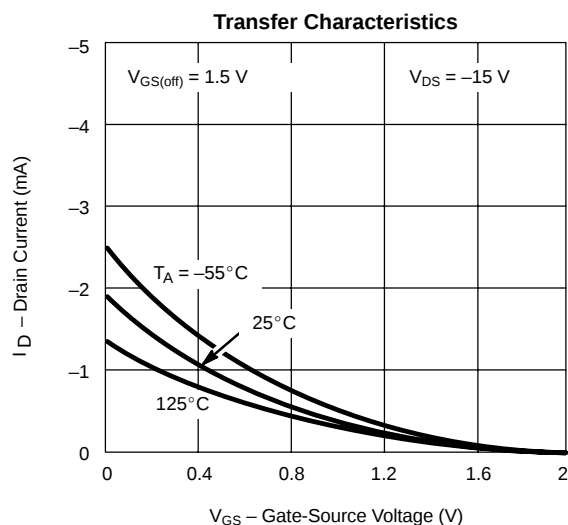
Parameter	Symbol	Test Conditions		Typ ^a	Limits						Unit	
					2N/SST5460		2N/SST5461		2N/SST5462			
					Min	Max	Min	Max	Min	Max		
Static												
Gate-Source Breakdown Voltage	V _{(BR)GSS}	I _G = 10 μA , V _{DS} = 0 V		55	40		40		40		V	
Gate-Source Cutoff Voltage	V _{GS(off)}	V _{DS} = −15 V, I _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					V	
			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}	2N		4.5		7		7		7	pF	
		SST		4.5								
Common-Source Reverse Transfer Capacitance	C _{rss}			1.2								
Common-Source Output Capacitance	C _{oss}	2N		1.5		2		2		2		
		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
				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							

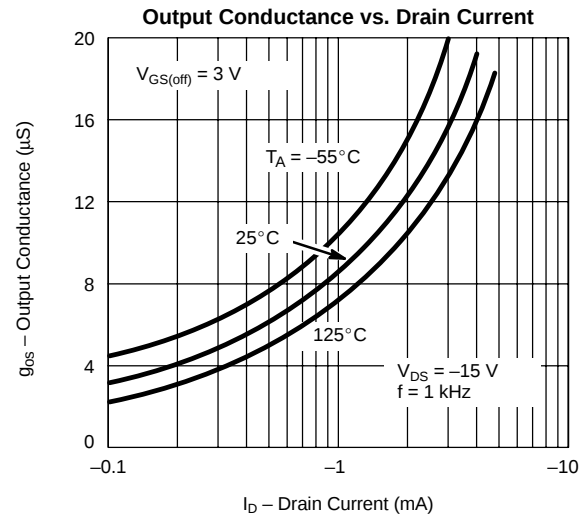
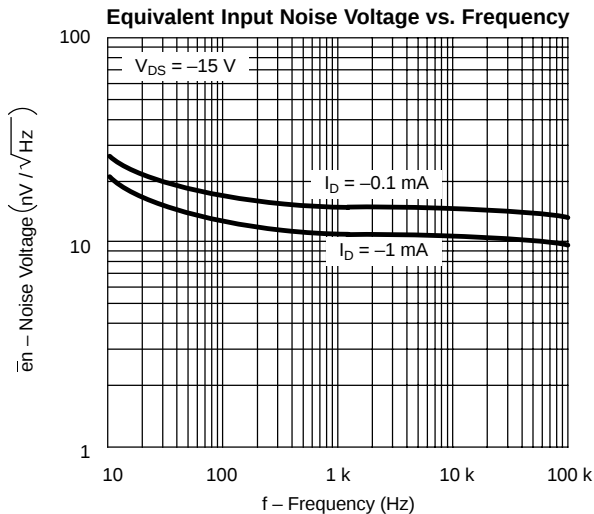
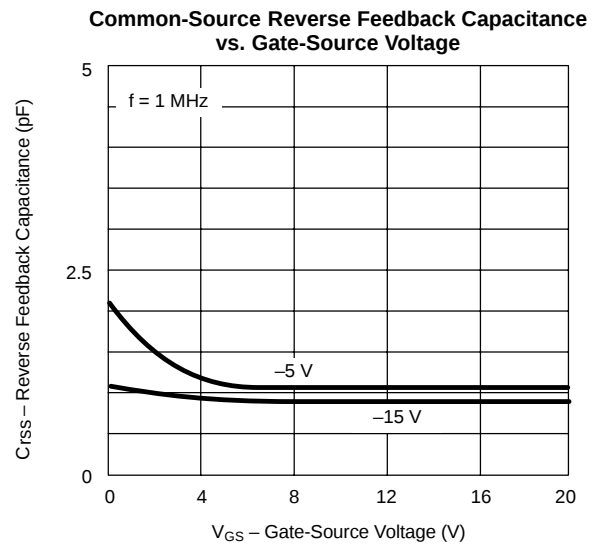
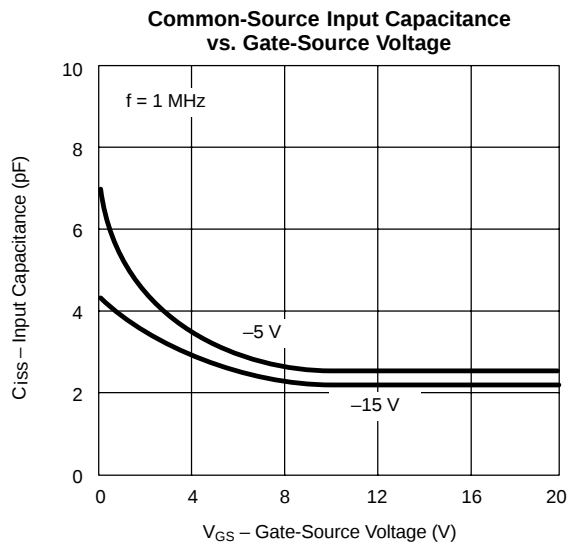
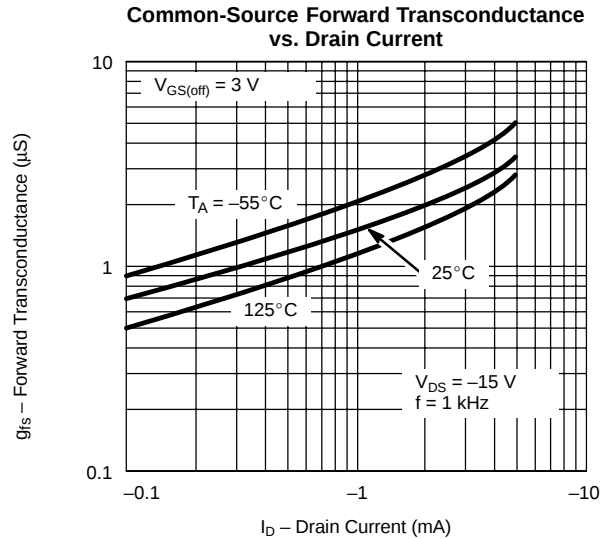
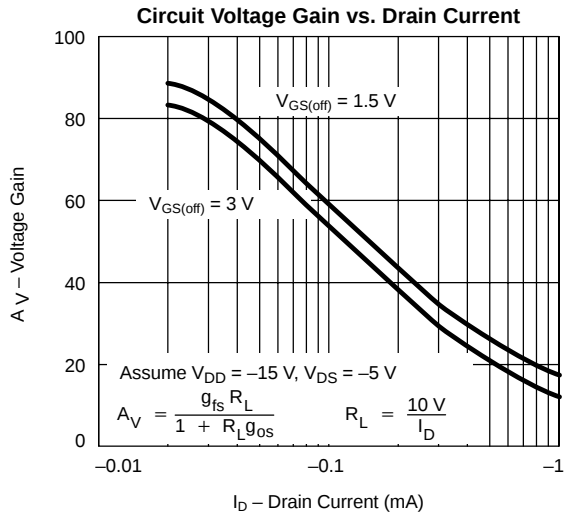
Notes

- a. Typical values are for DESIGN AID ONLY, not guaranteed nor subject to production testing.
b. Pulse test: $PW \leq 300\ \mu\text{s}$ duty cycle $\leq 2\%$.

PSCIB

**TYPICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ 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****Output Characteristics**

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


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



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