



P-Channel JFETs

2N5460
2N5461
2N5462

SST5460
SST5461
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

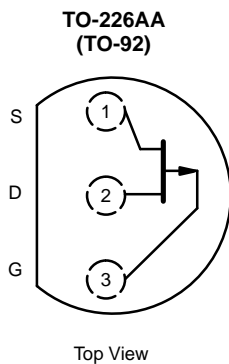
APPLICATIONS

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

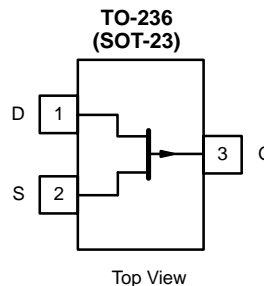
DESCRIPTION

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	$V_{(BR)GSS}$	$I_G = 10\ \mu\text{A}, V_{DS} = 0\ \text{V}$	55	40		40		40		V	
Gate-Source Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = -15\ \text{V}, I_D = -1\ \mu\text{A}$		0.75	6	1	7.5	1.8	9		
Saturation Drain Current ^b	I_{DSS}	$V_{DS} = -15\ \text{V}, V_{GS} = 0\ \text{V}$		-1	-5	-2	-9	-4	-16	mA	
Gate Reverse Current	I_{GSS}	$V_{GS} = 20\ \text{V}, V_{DS} = 0\ \text{V}$	0.003		5		5		5	nA	
			$T_A = 100^\circ\text{C}$	0.0003		1		1		1	μA
Gate Operating Current	I_G	$V_{DG} = -20\ \text{V}, I_D = -0.1\ \text{mA}$	3							pA	
Drain Cutoff Current	$I_{D(off)}$	$V_{DS} = -15\ \text{V}, V_{GS} = 10\ \text{V}$	-5								
Gate-Source Voltage	V_{GS}	$V_{DS} = -15\ \text{V}$	$I_D = -0.1\ \text{mA}$	1.3	0.5	4					V
			$I_D = -0.2\ \text{mA}$	2.3			0.8	4.5			
			$I_D = -0.4\ \text{mA}$	3.8					1.5	6	
Gate-Source Forward Voltage	$V_{GS(F)}$	$I_G = -1\ \text{mA}, V_{DS} = 0\ \text{V}$	-0.7								
Dynamic											
Common-Source Forward Transconductance	g_{fs}	$V_{DS} = -15\ \text{V}, V_{GS} = 0\ \text{V}$ $f = 1\ \text{kHz}$		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}	$V_{DS} = -15\ \text{V}, V_{GS} = 0\ \text{V}$ $f = 1\ \text{MHz}$	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	\bar{e}_n		2N	15		115		115		115	
		SST	15								
Noise Figure	NF	2N	0.2		2.5		2.5		2.5	dB	
		SST	0.2								

Notes

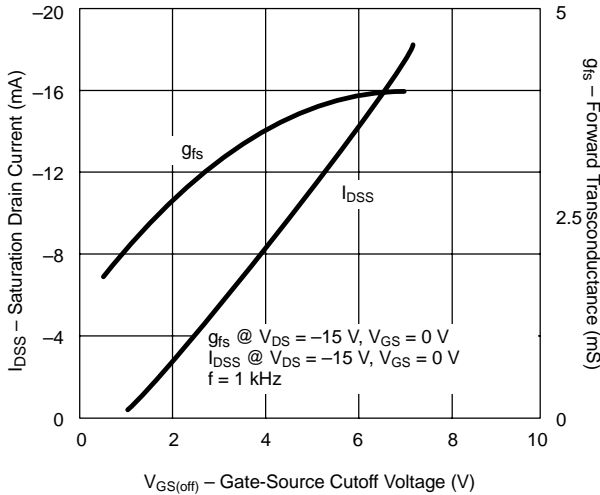
- a. Typical values are for DESIGN AID ONLY, not guaranteed nor subject to production testing.
- b. Pulse test: $PW \leq 300\ \mu\text{s}$ duty cycle $\leq 2\%$.

PSCIB

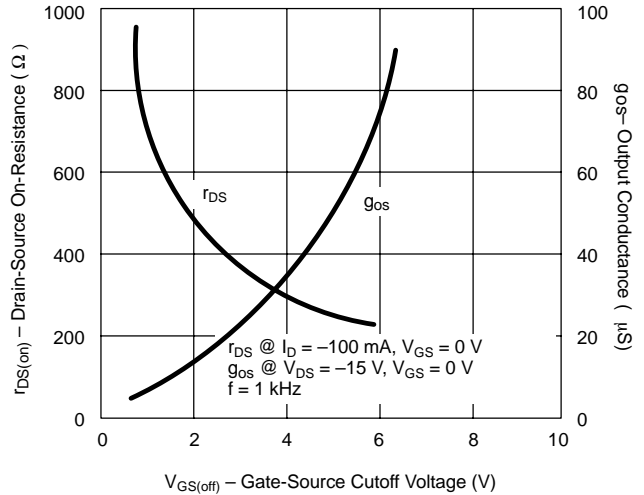


TYPICAL CHARACTERISTICS (T_A = 25°C UNLESS OTHERWISE NOTED)

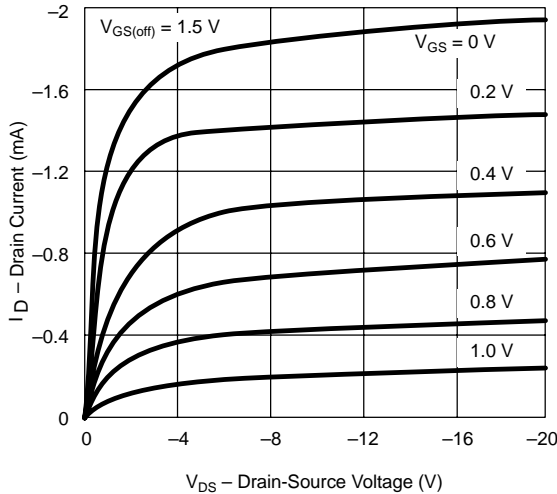
Drain Current and Transconductance vs. Gate-Source Cutoff Voltage



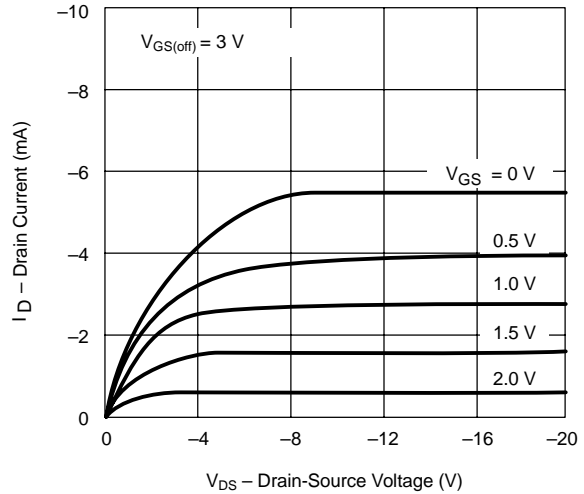
On-Resistance and Output Conductance vs. Gate-Source Cutoff Voltage



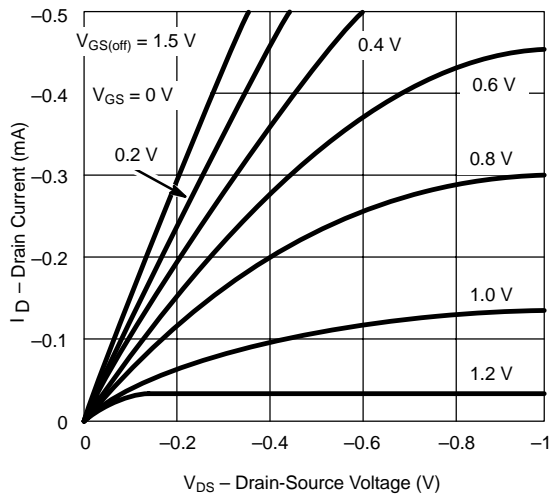
Output Characteristics



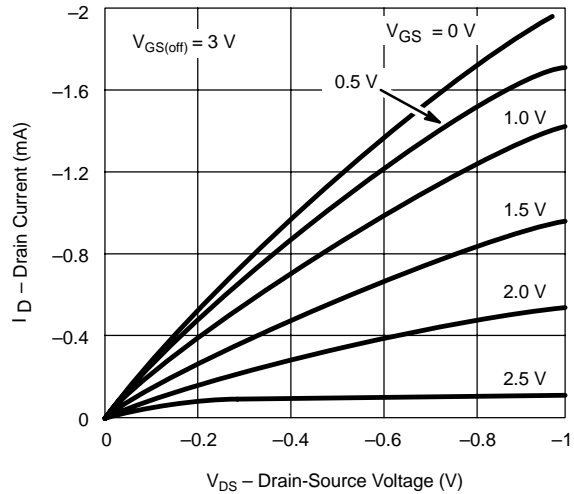
Output Characteristics



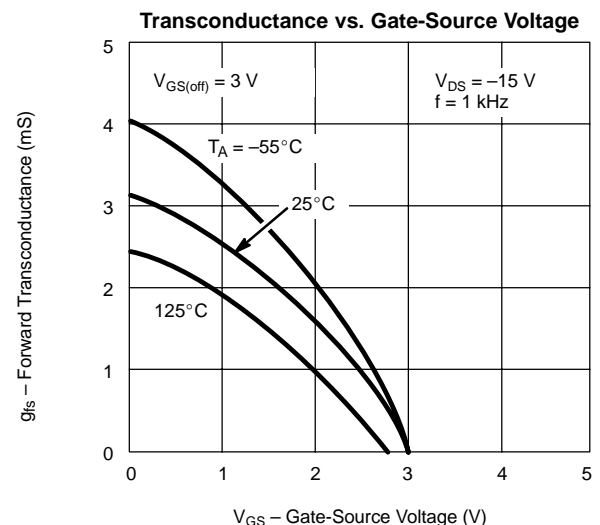
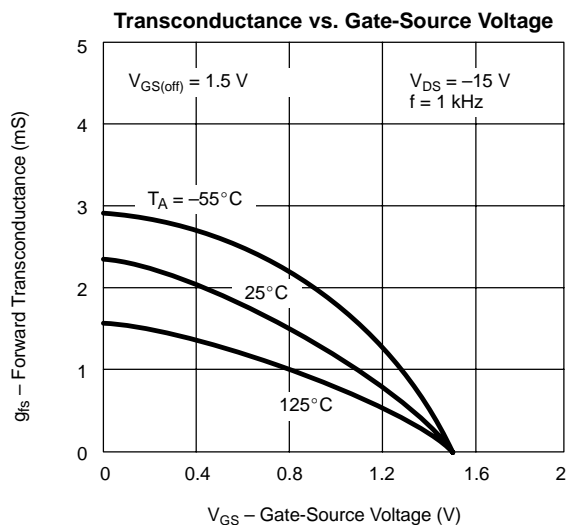
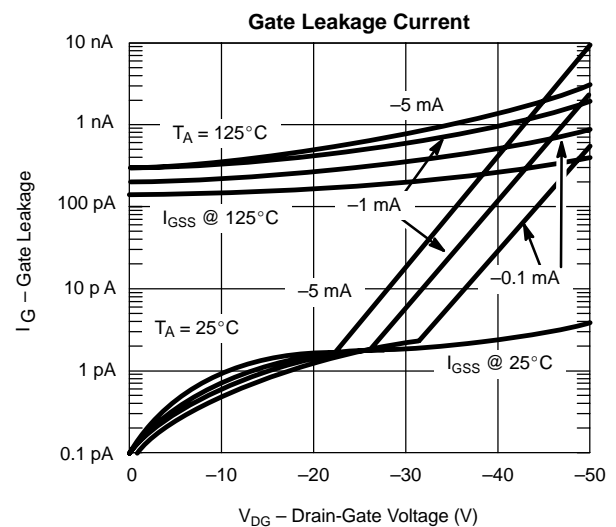
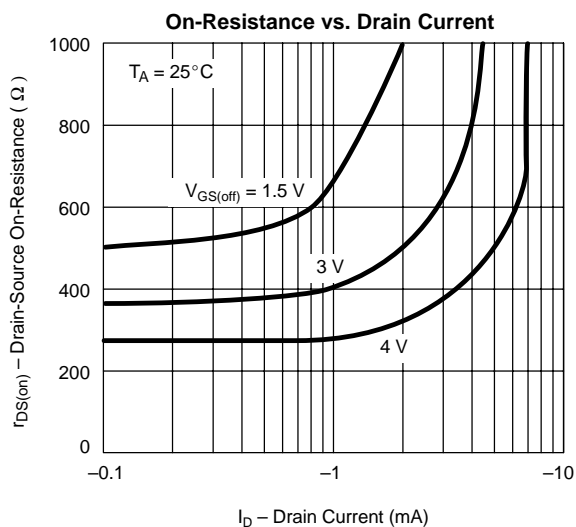
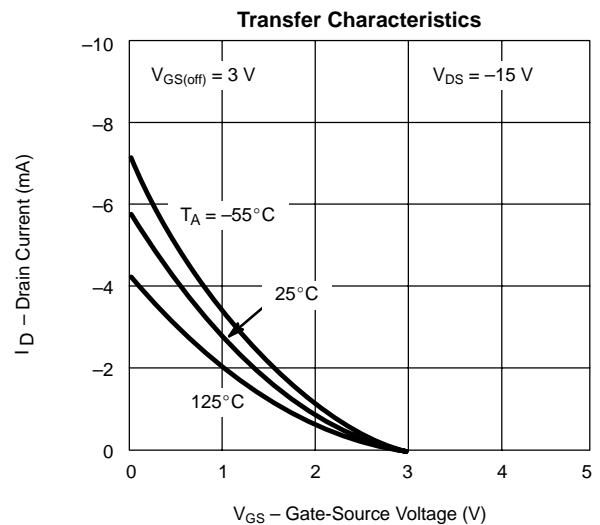
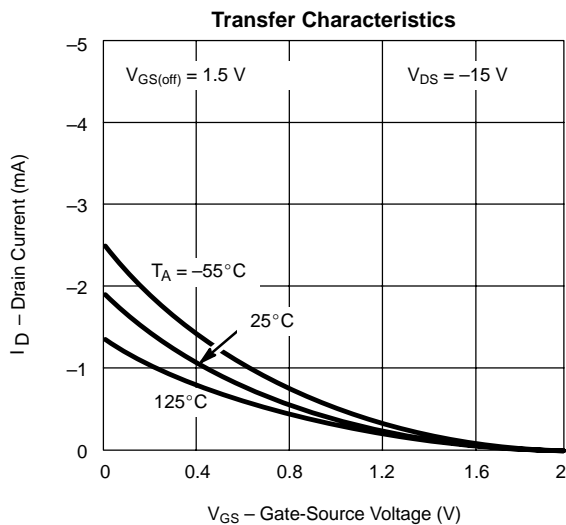
Output Characteristics



Output Characteristics



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