

TL/G/10035-56

DESCRIPTION

Process 98 is a high gain, general purpose, monolithic dual JFET with a diode isolated substrate. It is intended for amplifier input stages requiring high gain, low noise and low offset drift over temperature. Strict processing controls result in low input bias currents and virtually immeasurable offset currents. Matching characteristics are essentially independent of operating current and voltage.

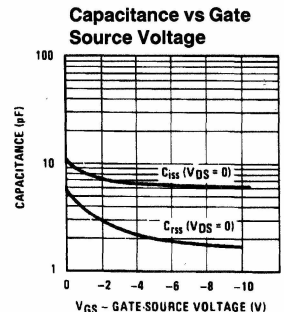
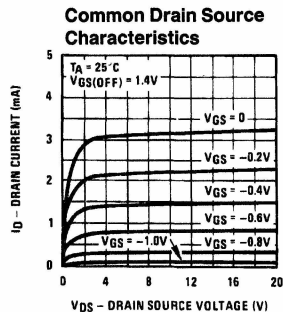
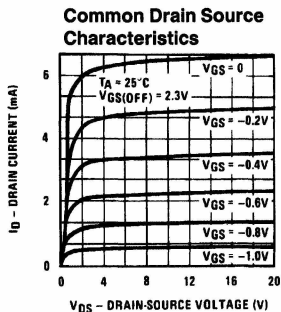
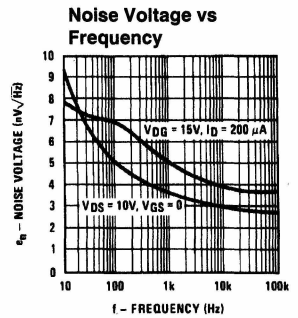
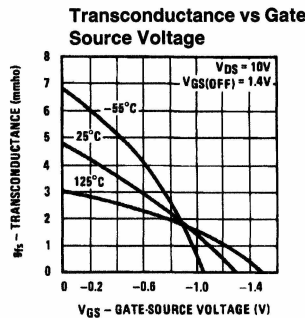
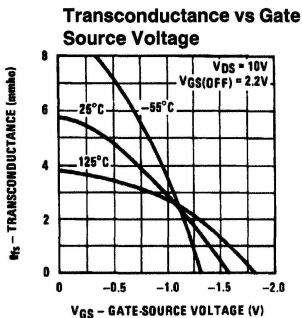
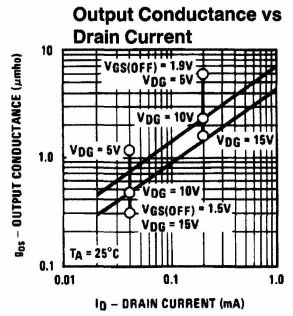
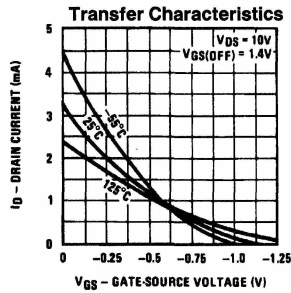
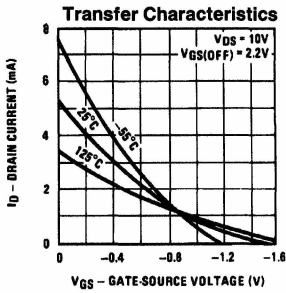
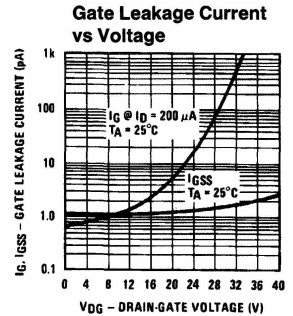
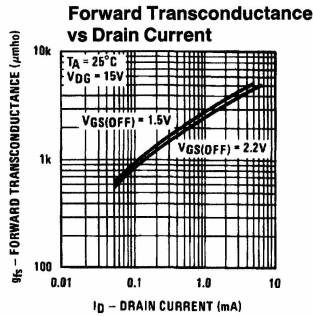
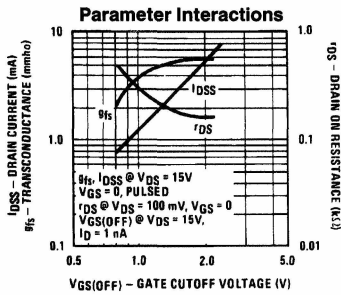
Electrical Characteristics ($T_A = 25^\circ\text{C}$)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
BV_{GSS}	Gate-Source Breakdown Voltage	$V_{DS} = 0V, I_G = -1 \mu A$	50	75		V
I_{GSS}	Gate Leakage Current	$V_{GS} = -30V, V_{DS} = 0V$		2.0	100	pA
$V_{GS(OFF)}$	Pinch-off Voltage	$V_{DS} = 15V, I_D = 1 nA$	0.5	1.3	3.0	V
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = 10V, V_{GS} = 0V$	0.5	1.8	10	mA
g_{fs}	Forward Transconductance	$V_{DS} = 10V, V_{GS} = 0V$	2.0	4.5	7.0	mmhos
g_{os}	Output Conductance	$V_{DS} = 10V, V_{GS} = 0V$		8.0	20	μmhos
g_{fs}	Forward Transconductance	$V_{DG} = 15V, I_D = 200 \mu A$	1.0	1.4	1.8	mmhos
g_{os}	Output Conductance	$V_{DG} = 15V, I_D = 200 \mu A$		1.3	2.0	μmhos
$ V_{GS1} - V_{GS2} $	Differential Offset Voltage	$V_{DG} = 10V, I_D = 200 \mu A$		10	40	mV
C_{rss}	Feedback Capacitance	$V_{DG} = 15V, I_D = 200 \mu A, f = 1 \text{ MHz}$		1.7	3.0	pF
C_{iss}	Input Capacitance	$V_{DG} = 15V, I_D = 200 \mu A, f = 1 \text{ MHz}$		6.0	8.0	pF
e_n	Noise Voltage	$V_{DS} = 15V, I_D = 200 \mu A, f = 10 \text{ Hz}$		8.0	50	$nV/\sqrt{\text{Hz}}$
CMRR	Common-Mode Rejection Ratio	$V_{DG} = 5V - 10V, I_D = 200 \mu A$	90	108		dB

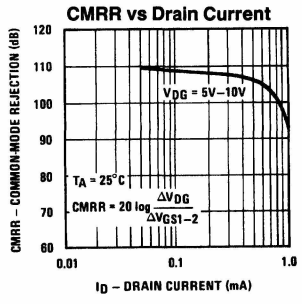
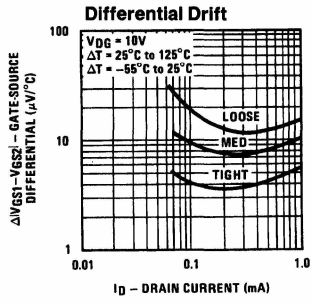
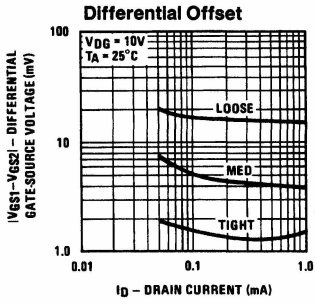
This process is available in the following device types. *Denotes preferred parts.

TO-71 (NS Package 12)		8-Pin DIP (NS Package 60)	
2N5561	U402	J401	
2N5562	U403	J402	
2N5563	U404	J403	
2N3921	U405	J404	
2N3922	U406	J405	
U401		J406	

Pin	60
1	NC
2	S1
3	D1
4	G1
5	S2
6	D2
7	G2
8	NC



Process 98



TL/G/10035-58