

monolithic dual n-channel JFETs designed for . . .



**Performance Curves NNR
See Section 5**

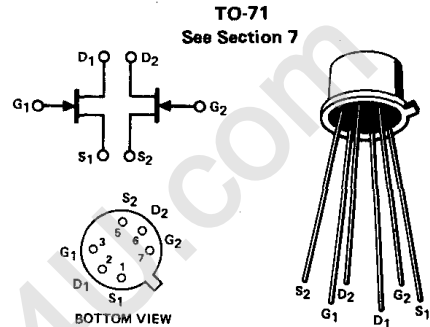
High Gain Differential Amplifiers

BENEFITS

- Minimum System Error and Calibration
5 mV Offset Maximum (2N5045)
- Low Drift
5 mV Drift Maximum (2N5045)

*ABSOLUTE MAXIMUM RATINGS (25°C)

Gate-Drain or Gate-Source Voltage -50 V
Forward Gate Current 30 mA
Total Dissipation (25°C Free Air Temp.) 400 mW
Power Derating (to 175°C) 2.67 mW/°C
Storage Temperature Range -65 to +200°C
Lead Temperature (1/16" from case for 10 seconds) 300°C



*ELECTRICAL CHARACTERISTICS (25°C unless otherwise noted)

Characteristic (Note 1)	2N5045		2N5046		2N5047		Unit	Test Conditions	
	Min	Max	Min	Max	Min	Max			
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 S T A T I C D Y N A M I C M A T C H I N G	IGSS	Gate Reverse Current	-1	-1	-1	-1	μA	VGS = -50 V, VDS = 0 V	
			-0.25	-0.25	-0.25	nA	VGS = -30 V, VDS = 0 V		
			-250	-250	-250	nA	T = 150°C		
VGS(off)	Gate-Source Cutoff Voltage	-0.5	-4.5	-0.5	-4.5	-0.5	-4.5	V	VDS = 15 V, ID = 0.5 nA
IDSS	Drain Saturation Current	0.5	8.0	0.5	8.0	0.5	8.0	mA	
gfs	Common-Source Forward Transconductance	1.5	6.0	1.5	6.0	1.5	6.0	mmho	f = 1 kHz
yfs	Common-Source Forward Admittance	1.5	1.5	1.5	1.5			mmho	f = 100 MHz
gos	Common-Source Output Conductance		25		25		25	μmho	f = 1 kHz
Ciss	Common-Source Input Capacitance		8.0		8.0		8.0	pF	VDS = 15 V, VGS = 0 V
Crss	Common-Source Reverse Transfer Capacitance		4.0		4.0		4.0	pF	f = 1 MHz
NF	Spot Noise Figure		5.0		5.0			dB	f = 10 Hz, RG = 1 MΩ
en	Equivalent Short-Circuit Input Noise Voltage		200		200			nV/√Hz	f = 10 Hz
IGSS1-IGSS2	Differential Gate Current		10		10		10	nA	VGS = -15 V, VDS = 0 V
IDSS1/IDSS2	Drain Current Ratio (Note 2)	0.95	1.0	0.9	1.0	0.8	1.0	—	VGS = 0 V, VDS = 15 V
VGS1-VGS2	Differential Gate-Source Voltage		5		10		15	mV	VDS = 15 V
Δ VGS1-VGS2	Gate-Source Voltage Differential Drift (Note 3)		5		10		15	mV	VDS = 15 V, ID = 200 μA, TA = 25°C
			5		10		15	mV	TB = -25°C
gfs1/gfs2	Transconductance Ratio (Note 2)	0.95	1.0	0.9	1.0	0.8	1.0	—	TB = 100°C
gos1-gos2	Diff. Output Conductance		1.0		2.0		3.0	μmho	VDS = 15 V, ID = 200 μA
									f = 1 kHz

*JEDEC registered data.

NOTES:

1. Individual FET characteristics. The terminals of the FET not under test are open-circuited for these measurements.
2. Assumes smaller value in numerator.
3. Measured at end points, TA and TB.

NNR
NRL-D