

monolithic dual n-channel JFETs designed for . . .



■ High Gain Differential Amplifiers

Performance Curves NNR
See Section 5

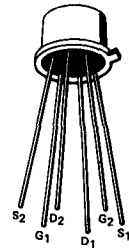
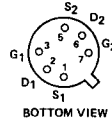
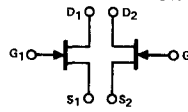
BENEFITS

- 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

TO-71
See Section 7



*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 S T A T I C	IGSS	Gate Reverse Current		-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		T = 150°C		
4	VGS(off)	Gate-Source Cutoff Voltage		-0.5	-4.5	-0.5	-4.5	V	VDS = 15 V, ID = 0.5 mA	
5	IDSS	Drain Saturation Current		0.5	8.0	0.5	8.0	mA		
6	gfs	Common-Source Forward Transconductance		1.5	6.0	1.5	6.0	mmho	f = 1 kHz	
7	|yfs|	Common-Source Forward Admittance		1.5		1.5			f = 100 MHz	
8	gOS	Common-Source Output Conductance			25		25	μmho	f = 1 kHz	
9	Ciss	Common-Source Input Capacitance			8.0		8.0	pF	VDS = 15 V, VGS = 0 V	
10	Crss	Common-Source Reverse Transfer Capacitance			4.0		4.0		f = 1 MHz	
11	NF	Spot Noise Figure			5.0		5.0	dB	f = 10 Hz, RG = 1 MΩ	
12	en	Equivalent Short-Circuit Input Noise Voltage			200		200	nV/√Hz	f = 10 Hz	
13	|IGSS1-IGSS2|	Differential Gate Current			10		10	nA	VGS = -15 V, VDS = 0 V, TA = 100°C	
14	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
15	|VGS1-VGS2|	Differential Gate-Source Voltage			5		10	15		ID = 50 μA
16					5		10	15	mV	ID = 200 μA
17	Δ|VGS1-VGS2|	Gate-Source Voltage Differential Drift (Note 3)			5		10	15		VDS = 15 V, ID = 200 μA, TB = -25°C
18					5		10	15		TA = 25°C, TB = 100°C
19	gfs1/gfs2	Transconductance Ratio (Note 2)		0.95	1.0	0.9	1.0	0.8	1.0	
20	|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