

T-91-60

## N-Channel JFETs

### Low-Noise Amplifiers

ELECTRICAL CHARACTERISTICS at  $T_A = 25^\circ\text{C}$

Device Type	$V_{IBRIGSS}$		$I_{GSS}$		$V_{GS(ion)}$				$I_{DSS}$			$g_m$			$C_{iss}^1$		$C_{oss}^1$		$f_{os}$ Max ( $\Omega$ )	Process
					Limits		Conditions													
	Min (V)	Max ( $\mu\text{A}$ )	Min (nA)	Max ( $V_{GS}$ ) (V)	Min (V)	Max (V)	$V_{GS}$ (V)	$I_D$ (nA)	Min (mA)	Max (mA)	$V_{DS}$ (V)	Min (mS)	Max (mS)	$V_{GS}$ (V)	Max (pF)	$V_{DS}$ (V)	Max (pF)	$V_{DS}$ (V)		
2N5556	-30	-1.0	-0.1	-15	-0.2	-4.0	15	1.0	0.5	2.5	15	1.5	6.5	15	6.0	15	3.0	15	—	NJ16
2N5557	-30	-1.0	-0.1	-15	-0.8	-5.0	15	1.0	2.0	5.0	15	1.5	6.5	15	6.0	15	3.0	15	—	NJ16
2N5558	-30	-1.0	-0.1	-15	-1.5	-6.0	15	1.0	4.0	10	15	1.5	6.5	15	6.0	15	3.0	15	—	NJ16
2N6451	-20	-1.0	0.1	10	-0.5	-3.5	10	1.0	5.0	20	10	—	—	—	25	10	5.0	10	—	NJ132L
2N6452	-25	1.0	0.5	15	-0.5	-3.5	10	1.0	5.0	20	10	—	—	—	25	10	5.0	10	—	NJ132L
2N6453	-20	-1.0	0.1	-10	-0.75	-5.0	10	1.0	15	50	10	—	—	—	25	10	5.0	10	—	NJ132L
2N6454	-25	-1.0	-0.5	-15	0.75	5.0	10	1.0	15	50	10	—	—	—	25	10	5.0	10	—	NJ132L
NF5101	-40	-1.0	0.2	15	0.5	1.1	15	1.0	1.0	12	15	3.5	—	15	12	15	4.0	15	—	NJ99
NF5102	40	1.0	0.2	15	-0.7	1.6	15	1.0	4.0	20	15	7.5	—	15	12	15	4.0	15	—	NJ99
NF5103	40	1.0	0.2	15	1.2	2.7	15	1.0	10	40	15	7.5	—	15	12	15	4.0	15	—	NJ99

NOTE  
1)  $V_{GS} = 0\text{V}$

### Low-Leakage Device Types

ELECTRICAL CHARACTERISTICS at  $T_A = 25^\circ\text{C}$

Device Type	$V_{IBRIGSS}$		$I_{GSS}$		$V_{GS(ion)}$				$I_{DSS}$			$g_m$			$C_{iss}^1$		$C_{oss}^1$		$f_{os}$ Max ( $\Omega$ )	Process
					Limits		Conditions													
	Min (V)	Max ( $\mu\text{A}$ )	Min (pA)	Max ( $V_{GS}$ ) (V)	Min (V)	Max (V)	$V_{GS}$ (V)	$I_D$ (nA)	Min ( $\mu\text{A}$ )	Max ( $\mu\text{A}$ )	$V_{DS}$ (V)	Min (mS)	Max (mS)	$V_{GS}$ (V)	Max (pF)	$V_{DS}$ (V)	Max (pF)	$V_{DS}$ (V)		
2N4117	40	1.0	10	20	0.6	-1.8	10	1.0	30	90	10	70	210	10	3.0	10	1.5	10	—	NJ01
2N4117A	-40	-1.0	1.0	20	0.6	1.8	10	1.0	30	90	10	70	210	10	3.0	10	1.5	10	—	NJ01
2N4118	-40	-1.0	10	20	-1.0	-3.0	10	1.0	80	240	10	80	250	10	3.0	10	1.5	10	—	NJ01
2N4118A	40	-1.0	-1.0	20	-1.0	-3.0	10	1.0	80	240	10	80	250	10	3.0	10	1.5	10	—	NJ01
2N4119	-40	-1.0	10	20	2.0	-6.0	10	1.0	200	600	10	100	330	10	3.0	10	1.5	10	—	NJ01
2N4119A	40	-1.0	-1.0	20	2.0	-6.0	10	1.0	200	600	10	100	330	10	3.0	10	1.5	10	—	NJ01
NF5301	-30	-1.0	-1.0	15	-0.6	-3.0	10	1.0	30	500	10	70	300	10	3.0	10	1.5	10	—	NJ01
NF5301-1	-30	-1.0	-1.0	15	0.6	-1.8	10	1.0	30	500	10	70	300	10	3.0	10	1.5	10	—	NJ01
NF5301-2	30	1.0	1.0	15	1.7	-3.0	10	1.0	30	500	10	70	300	10	3.0	10	1.5	10	—	NJ01
NF5301-3	-30	1.0	1.0	15	1.0	3.4	10	1.0	30	500	10	70	300	10	3.0	10	1.5	10	—	NJ01

NOTE  
1)  $V_{GS} = 0\text{V}$

### High-Voltage Device Types

ELECTRICAL CHARACTERISTICS at  $T_A = 25^\circ\text{C}$

Device Type	$V_{IBRIGSS}$		$I_{GSS}$		$V_{GS(ion)}$				$I_{DSS}$			$g_m$			$C_{iss}^1$		$C_{oss}^1$		$f_{os}$ Max ( $\Omega$ )	Process
					Limits		Conditions													
	Min (V)	Max ( $\mu\text{A}$ )	Min (nA)	Max ( $V_{GS}$ ) (V)	Min (V)	Max (V)	$V_{GS}$ (V)	$I_D$ (nA)	Min (mA)	Max (mA)	$V_{DS}$ (V)	Min (mS)	Max (mS)	$V_{GS}$ (V)	Max (pF)	$V_{DS}$ (V)	Max (pF)	$V_{DS}$ (V)		
2N6449	-300	-10	100	-150	-2.0	-15	30	4.0	2.0	10	30	0.5	3.0	30	10	30	5.0	30	—	NJ42
2N6450	-200	-10	100	-100	-2.0	-15	30	4.0	2.0	10	30	0.5	3.0	30	10	30	5.0	30	—	NJ42

NOTE  
1)  $V_{GS} = 0\text{V}$