

8514019 SPRAGUE. SEMICONDS/ICS

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T-29-25

METAL-CASE JUNCTION FIELD-EFFECT TRANSISTORS

N-Channel JFETs

Low-Noise Amplifiers

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

ELECTRICAL CHARACTERISTICS at $T_A = 25^\circ\text{C}$																				
Device Type	$V_{\text{BR}(\text{GSS})}$		I_{GSS}		$V_{\text{GS}(\text{OFF})}$				I_{DSS}			θ_{IS}			C_{ISS}^1		C_{RSS}^1		r_{DS} Max. (Ω)	Process
					Limits		Conditions													
	Min. (V)	αI_{G} (μA)	Max. (nA)	αV_{GS} (V)	Min. (V)	Max. (V)	V_{DS} (V)	I_{D} (nA)	Min. (mA)	Max. (mA)	αV_{DS} (V)	Min. (mS)	Max. (mS)	αV_{DS} (V)	Max. (pF)	αV_{DS} (V)	Max. (pF)	αV_{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) $V_{\text{GS}} = 0 \text{ V}$.

Low-Leakage Device Types

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

ELECTRICAL CHARACTERISTICS at $T_A = 25\text{ }^{\circ}\text{C}$																				
Device Type	$V_{\text{BR}(\text{GSS})}$		I_{GSS}		$V_{\text{GS}(\text{ref})}$				I_{DSS}			θ_{IS}			C_{ISS}^1		C_{RSS}^1		r_{DS} Max. (Ω)	Process
					Limits		Conditions													
	Min. (V)	(αI_{G}) (μA)	Max. (pA)	(αV_{GS}) (V)	Min. (V)	Max. (V)	V_{DS} (V)	I_{D} (nA)	Min. (μA)	Max. (μA)	(αV_{DS}) (V)	Min. (mS)	Max. (mS)	(αV_{DS}) (V)	Max. (pF)	(αV_{DS}) (V)	Max. (pF)	(αV_{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) $V_{\text{GS}} = 0 \text{ V}$.

High-Voltage Device Types

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

ELECTRICAL CHARACTERISTICS at $T_A = 25^\circ\text{C}$																				
Device Type	$V_{\text{BR}(\text{GSS})}$		I_{GSS}		$V_{\text{GS}(\text{on})}$				I_{DSS}			θ_{IS}			C_{ISS}^1		C_{RSS}^1		$r_{\text{DS Max.}} (\Omega)$	Process
					Limits		Conditions													
	Min. (V)	$\alpha I_{\text{G}} (\mu\text{A})$	Max. (nA)	$\alpha V_{\text{GS}} (\text{V})$	Min. (V)	Max. (V)	$V_{\text{DS}} (\text{V})$	$I_{\text{D}} (\text{nA})$	Min. (mA)	Max. (mA)	$\alpha V_{\text{DS}} (\text{V})$	Min. (mS)	Max. (mS)	$\alpha V_{\text{DS}} (\text{V})$	Max. (pF)	$\alpha V_{\text{DS}} (\text{V})$	Max. (pF)	$\alpha V_{\text{DS}} (\text{V})$		
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) $V_{\text{GS}} = 0 \text{ V}$.