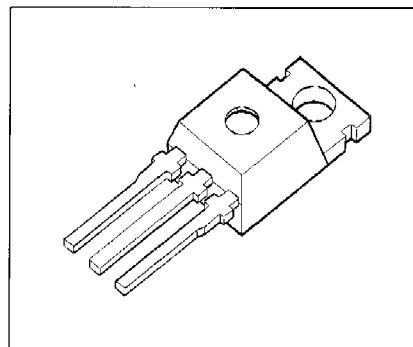


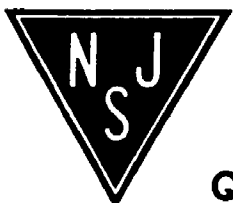
Type	V <sub>DS</sub>	I <sub>D</sub>	R <sub>DS(on)</sub>	Package
BUZ 80A	800 V	3 A	3 Ω	TO-220 AB

**Maximum Ratings**

Parameter	Symbol	Values	Unit
Drain source voltage	V <sub>DS</sub>	800	V
Drain-gate voltage R <sub>GS</sub> = 20 kΩ	V <sub>DGR</sub>	800	
Continuous drain current T <sub>C</sub> = 50 °C	I <sub>D</sub>	3	A
Pulsed drain current T <sub>C</sub> = 25 °C	I <sub>Dpuls</sub>	12	
Gate source voltage	V <sub>GS</sub>	± 20	V
Power dissipation T <sub>C</sub> = 25 °C	P <sub>tot</sub>	75	W
Operating temperature	T <sub>j</sub>	-55 ... ..+ 150	°C
Storage temperature	T <sub>stg</sub>	-55 ... ..+ 150	
Thermal resistance, chip case	R <sub>thJC</sub>	≤ 1.67	K/W
Thermal resistance, chip to ambient	R <sub>thJA</sub>	75	
DIN humidity category, DIN 40 040		E	
IEC climatic category, DIN IEC 68-1		55 / 150 / 56	



Pin 1	Pin 2	Pin 3
G	D	S



**Quality Semi-Conductors**

**BUZ 80A**

**Electrical Characteristics, at  $T_j = 25^\circ\text{C}$ , unless otherwise specified**

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

**Static Characteristics**

Drain- source breakdown voltage $V_{GS} = 0\text{ V}, I_D = 0.25\text{ mA}, T_j = 25^\circ\text{C}$	$V_{(BR)DSS}$	800	-	-	V
Gate threshold voltage $V_{GS} = V_{DS}, I_D = 1\text{ mA}$	$V_{GS(th)}$	2.1	3	4	
Zero gate voltage drain current $V_{DS} = 800\text{ V}, V_{GS} = 0\text{ V}, T_j = 25^\circ\text{C}$ $V_{DS} = 800\text{ V}, V_{GS} = 0\text{ V}, T_j = 125^\circ\text{C}$	$I_{DSS}$	-	20 100	250 1000	$\mu\text{A}$
Gate-source leakage current $V_{GS} = 20\text{ V}, V_{DS} = 0\text{ V}$	$I_{GSS}$	-	10	100	nA
Drain-Source on-resistance $V_{GS} = 10\text{ V}, I_D = 1.5\text{ A}$	$R_{DS(on)}$	-	2.7	3	$\Omega$



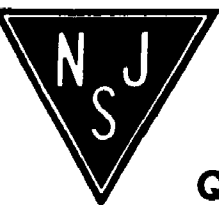
**BUZ 80A**

**Electrical Characteristics, at  $T_j = 25^\circ\text{C}$ , unless otherwise specified**

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

**Dynamic Characteristics**

Transconductance $V_{DS} \geq 2 \cdot I_D \cdot R_{DS(on)max}$ , $I_D = 1.5 \text{ A}$	$g_{fs}$	1	1.8	-	S
Input capacitance $V_{GS} = 0 \text{ V}$ , $V_{DS} = 25 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{iss}$	-	1600	2100	pF
Output capacitance $V_{GS} = 0 \text{ V}$ , $V_{DS} = 25 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{oss}$	-	90	150	
Reverse transfer capacitance $V_{GS} = 0 \text{ V}$ , $V_{DS} = 25 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{rss}$	-	30	55	
Turn-on delay time $V_{DD} = 30 \text{ V}$ , $V_{GS} = 10 \text{ V}$ , $I_D = 3 \text{ A}$ $R_{GS} = 50 \Omega$	$t_{d(on)}$	-	30	45	ns
Rise time $V_{DD} = 30 \text{ V}$ , $V_{GS} = 10 \text{ V}$ , $I_D = 3 \text{ A}$ $R_{GS} = 50 \Omega$	$t_r$	-	40	60	
Turn-off delay time $V_{DD} = 30 \text{ V}$ , $V_{GS} = 10 \text{ V}$ , $I_D = 3 \text{ A}$ $R_{GS} = 50 \Omega$	$t_{d(off)}$	-	110	140	
Fall time $V_{DD} = 30 \text{ V}$ , $V_{GS} = 10 \text{ V}$ , $I_D = 3 \text{ A}$ $R_{GS} = 50 \Omega$	$t_f$	-	60	80	



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