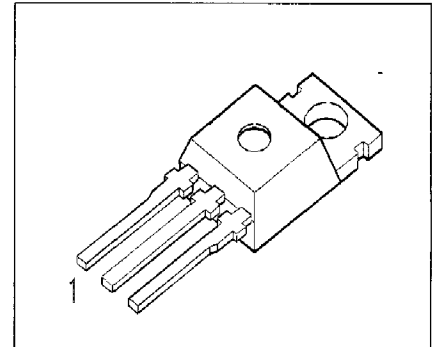


- N channel
- Enhancement mode
- Avalanche-rated
- Logic Level

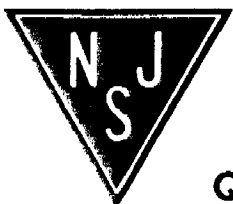


Pin 1	Pin 2	Pin 3
G	D	S

Type	V <sub>DS</sub>	I <sub>D</sub>	R <sub>DS(on)</sub>	Package
BUZ 72 L	100 V	10 A	0.2 Ω	TO-220 AB

**Maximum Ratings**

Parameter	Symbol	Values	Unit
Continuous drain current $T_C = 25\text{ }^\circ\text{C}$	$I_D$	10	A
Pulsed drain current $T_C = 25\text{ }^\circ\text{C}$	$I_{Dpuls}$	40	
Avalanche current, limited by $T_{jmax}$	$I_{AR}$	10	
Avalanche energy, periodic limited by $T_{jmax}$	$E_{AR}$	7.9	mJ
Avalanche energy, single pulse $I_D = 10\text{ A}$ , $V_{DD} = 25\text{ V}$ , $R_{GS} = 25\text{ }\Omega$ $L = 885\text{ }\mu\text{H}$ , $T_j = 25\text{ }^\circ\text{C}$	$E_{AS}$	59	
Gate source voltage	$V_{GS}$	$\pm 14$	V
Gate-source peak voltage, aperiodic	$V_{gs}$	$\pm 20$	
Power dissipation $T_C = 25\text{ }^\circ\text{C}$	$P_{tot}$	40	W
Operating temperature	$T_j$	-55 ... + 150	°C
Storage temperature	$T_{stg}$	-55 ... + 150	
Thermal resistance, chip case	$R_{thJC}$	$\leq 3.1$	K/W
Thermal resistance, chip to ambient	$R_{thJA}$	75	
DIN humidity category, DIN 40 040		E	
IEC climatic category, DIN IEC 68-1		55 / 150 / 56	



**BUZ 72 L****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 $V_{GS} = 0\text{ V}, I_D = 0.25\text{ mA}, T_j = 25^\circ\text{C}$	$V_{(BR)DSS}$	100	-	-	V
Gate threshold voltage $V_{GS} = V_{DS}, I_D = 1\text{ mA}$	$V_{GS(th)}$	1.2	1.6	2	
Zero gate voltage drain current $V_{DS} = 100\text{ V}, V_{GS} = 0\text{ V}, T_j = 25^\circ\text{C}$ $V_{DS} = 100\text{ V}, V_{GS} = 0\text{ V}, T_j = 125^\circ\text{C}$	$I_{DSS}$	-	0.1 10	1 100	$\mu\text{A}$
Gate-source leakage current $V_{GS} = 20\text{ V}, V_{DS} = 0\text{ V}$	$I_{GSS}$	-	10	100	nA
Drain-Source on-resistance $V_{GS} = 5\text{ V}, I_D = 5\text{ A}$	$R_{DS(on)}$	-	0.12	0.2	$\Omega$

# BUZ 72 L

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

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

## Dynamic Characteristics

Transconductance $V_{DS} \geq 2 \cdot I_D \cdot R_{DS(on)max}$ , $I_D = 5 \text{ A}$	$g_{fs}$	5	7.5	-	S
Input capacitance $V_{GS} = 0 \text{ V}$ , $V_{DS} = 25 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{iss}$	-	680	900	pF
Output capacitance $V_{GS} = 0 \text{ V}$ , $V_{DS} = 25 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{oss}$	-	180	250	
Switching capacitance $V_{HT} = 1 \text{ V}$ , $V_{ET} = 36 \text{ V}$ , $f = 1 \text{ MHz}$	$C_{st}$	-	1	261	
Turn-off delay time $V_{EE} = 41 \text{ V}$ , $V_{HT} = 6 \text{ V}$ , $I_E = 4 \text{ B}$ $R_{HT} = 61 \text{ X}$	$t_{e)po}$	-	31	41	ns
Storage time $V_{EE} = 41 \text{ V}$ , $V_{HT} = 6 \text{ V}$ , $I_E = 4 \text{ B}$ $R_{HT} = 61 \text{ X}$	$t_s$	-	96	241	
Turn-on delay time $V_{EE} = 41 \text{ V}$ , $V_{HT} = 6 \text{ V}$ , $I_E = 4 \text{ B}$ $R_{HT} = 61 \text{ X}$	$t_{e)pg}$	-	211	241	
Gate delay time $V_{EE} = 41 \text{ V}$ , $V_{HT} = 6 \text{ V}$ , $I_E = 4 \text{ B}$ $R_{HT} = 61 \text{ X}$	$t_g$	-	66	81	