

7A,650V N-Channel Power Mosfet

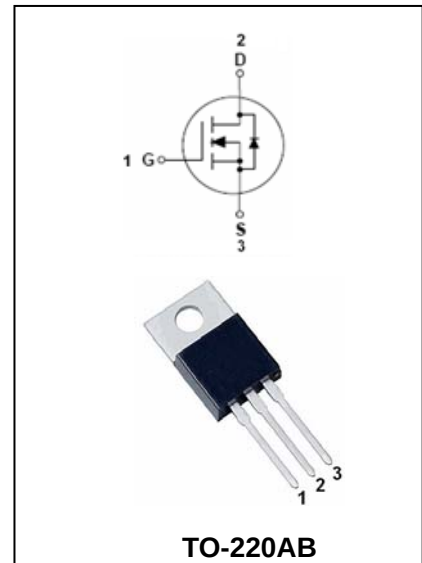
BL7N65

FEATURES

- $R_{DS(ON)} = 1.35\Omega @ V_{GS} = 10V$
- Ultra low gate charge (typical 30 nC)
- Low reverse transfer Capacitance ($CRSS = \text{typical } 18 \text{ pF}$)
- Fast switching capability
- Avalanche energy specified
- Improved dv/dt capability, high ruggedness



Lead-free



MAXIMUM RATING @ $T_a = 25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Units
V_{DSS}	Drain-Source voltage	650	V
V_{GSS}	Gate -Source voltage	± 20	V
I_D	Continuous Drain Current	7.0	A
I_{DM}	Pulsed Drain Current	28	A
E_{AS}	Avalanche Energy Single Pulsed	450	mJ
P_D	Power Dissipation	100	W
T_J	Junction Temperature	+150	$^\circ\text{C}$
T_{OPR}, T_{stg}	Operating and Storage Temperature	-55 to +150	$^\circ\text{C}$

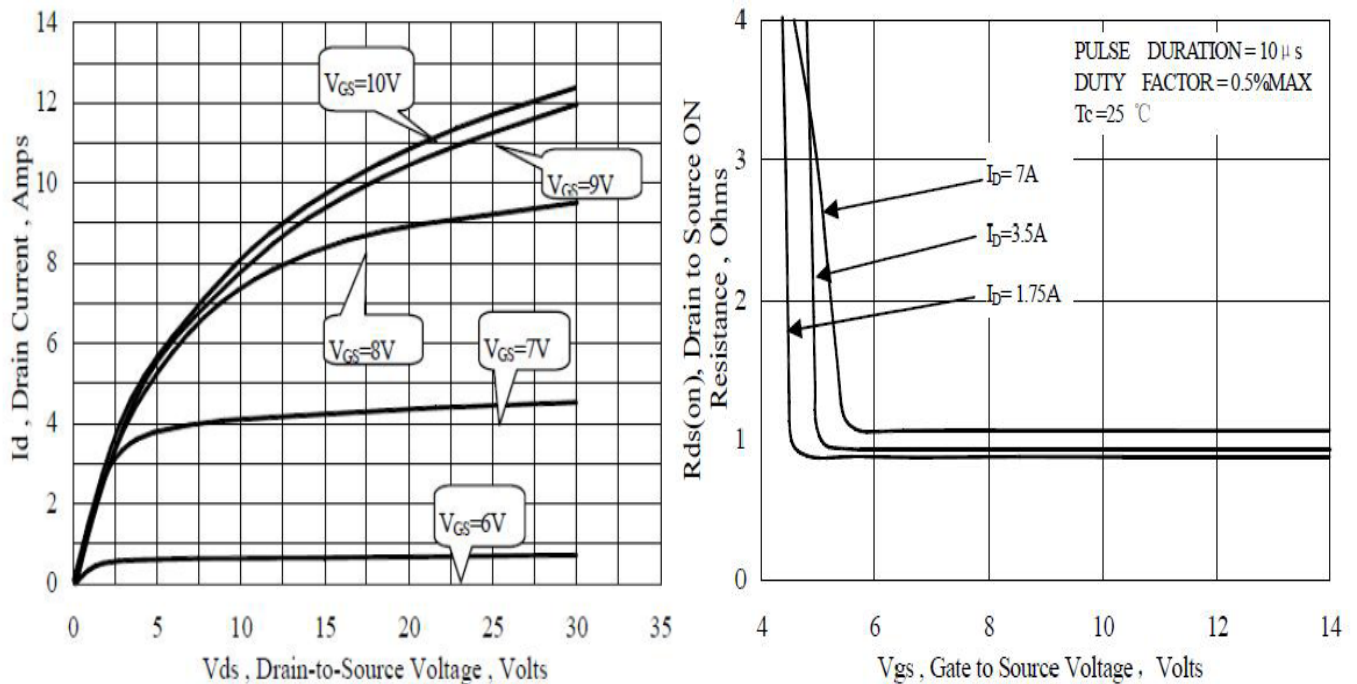
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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

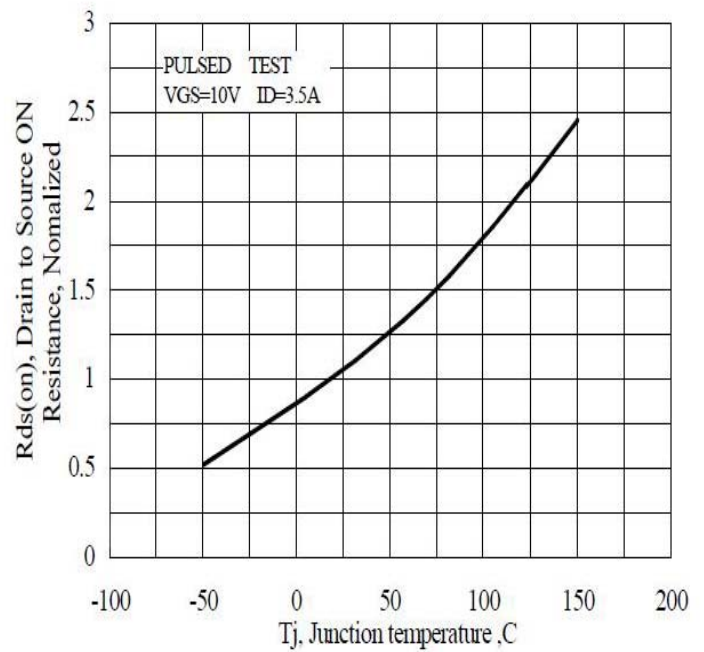
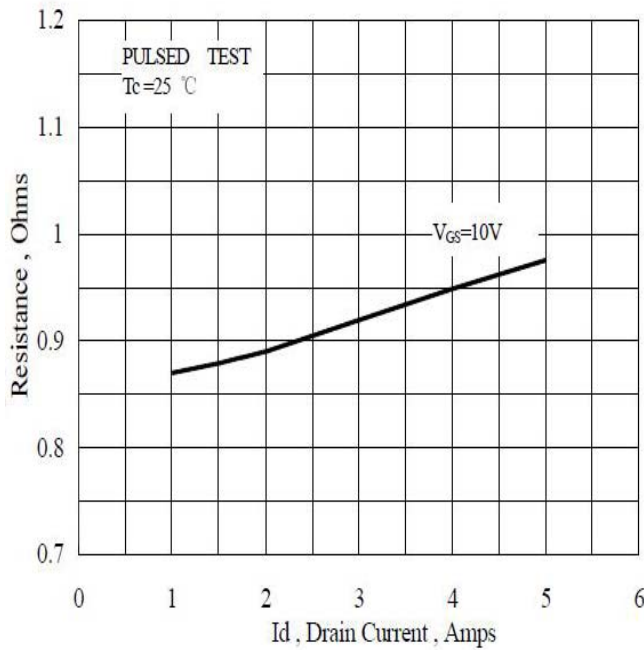
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250\mu A$	650	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=650V, V_{GS}=0V$	-	-	1	μA
Gate-body Leakage	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$	-	-	± 100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	2.0	-	4.0	V
Static drain-Source on-resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=3.5A$	-	-	1.4	Ω
DYNAMIC CHARACTERISTICS						
Input capacitance	C_{ISS}	$V_{DS}=25V, V_{GS}=0V, f=1.0MHz$	-	1123	-	pF
Output capacitance	C_{OSS}		-	110	-	
Reverse transfer capacitance	C_{RSS}		-	11	-	

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



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PACKAGE OUTLINE

Plastic surface mounted package

TO-220AB

