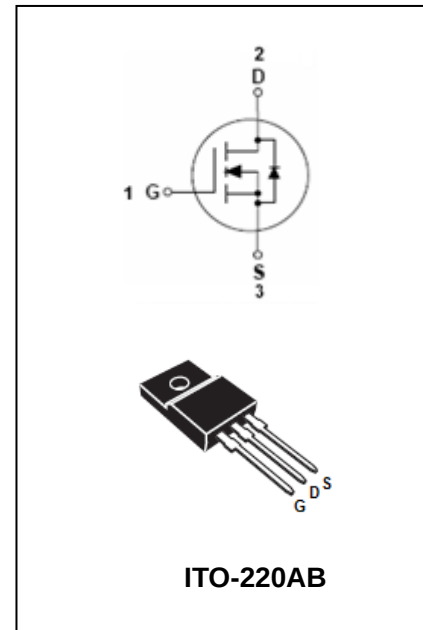


4A,500V N-Channel Power Mosfet

BL4N50F

FEATURES

- $R_{DS(ON)} = 2.0\Omega @ V_{GS} = 10V$
- High Switching Speed
- 100% Avalanche Tested



MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V_{DSS}	Drain-Source voltage	500	V
V_{GSS}	Gate -Source voltage	± 30	V
I_D	Continuous Drain Current	4	A
I_{DM}	Pulsed Drain Current	16	A
E_{AS} E_{AR}	Avalanche Energy Single Pulsed Repetitive	216 8.5	mJ
dv/dt	Peak Diode Recovery dv/dt	4.5	V/ns
P_D	Power Dissipation	28	W
$R_{\theta JA}$	Thermal resistance, Junction-to-Ambient	62.5	°C/W
θ_{JA}	Junction to Ambient	62.5	°C/W
θ_{JC}	Junction to Case	4.5	°C/W
T_J	Junction Temperature	+150	°C
T_{OPR}, T_{stg}	Operating and Storage Temperature	-55 to +150	°C

4A,500V N-Channel Power Mosfet

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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 =250μA	500	-	-	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =500V, V _{GS} =0V	-	-	1	μA
Gate-body Leakage	I _{GSS}	V _{DS} =0V, V _{GS} = ± 30V	-	-	± 100	nA
ON CHARACTERISTICS						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	2.0	-	4.0	V
Static drain-Source on-resistance	R _{DS(ON)}	V _{GS} =10V, I _D =2A	-	1.65	2.0	Ω
DYNAMIC CHARACTERISTICS						
Input capacitance	C _{ISS}	V _{DS} =25V, V _{GS} =0V, f=1.0MHz	-	485	650	pF
Output capacitance	C _{OSS}		-	65	90	
Reverse transfer capacitance	C _{RSS}		-	5	8	
SWITCHING CHARACTERISTICS						
Turn-On Delay Time	t _{D(ON)}	V _{DD} = 250V, I _D = 4A, R _G = 25Ω	-	14	38	ns
Rise Time	tr		-	21	52	ns
Turn-Off Delay Time	t _{D(OFF)}		-	27	64	ns
Fall Time	tf		-	20	50	ns
Total Gate Charge	Qg	V _{DS} = 400V I _D = 4A V _{GS} = 10V,	-	11	15	nC
Gate–Source Charge	Qgs		-	3	-	nC
Gate–Drain Charge	Qgd		-	5	-	nC
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS						
Drain-Source diode forward voltage	V _{SD}	V _{GS} =0V, I _s =4A	-	-	1.6	V
Maximum Continuous Drain-Source Diode Forward Current	I _s		-	-	4	A
Maximum Pulsed Drain-Source Diode Forward Current	I _{SM}		-	-	16	A
Body Diode Reverse Recovery Time	trr	V _{GS} =0V ,I _s =4A, dI/dt=100A/μ s	-	36	-	nS
Body Diode Reverse Recovery Charge	Qrr		-	33	-	uC

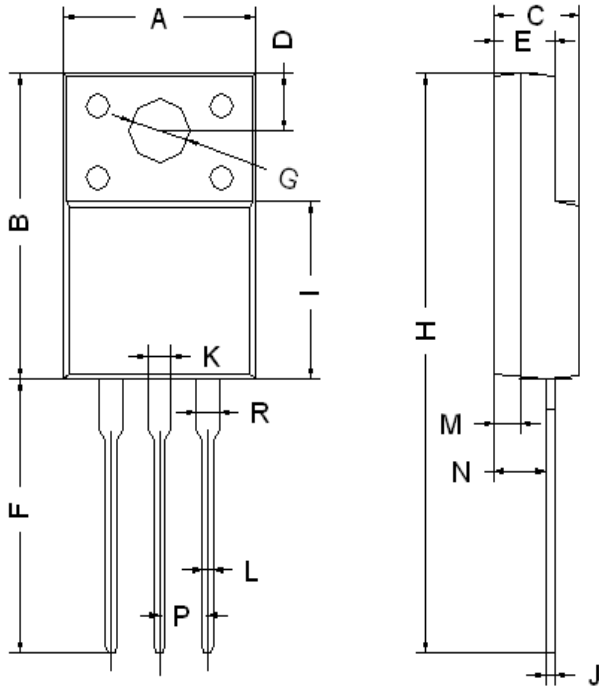
4A,500V N-Channel Power Mosfet

BL4N50F

PACKAGE OUTLINE

Plastic surface mounted package

ITO-220AB



ITO-220AB		
Dim	Min	Max
A	9.90	10.30
B	14.80	15.20
C	4.50 Typical	
D	2.70 Typical	
E	2.80	3.30
F	13.00	13.60
G	3.2 Typical	
H	28.00	28.60
I	7.90	8.90
J	0.50 Typical	
L	0.70	0.90
M	1.40 Typical	
N	2.60	2.80
P	2.45	2.65
K/R	1.20 Typical	
All Dimensions in mm		