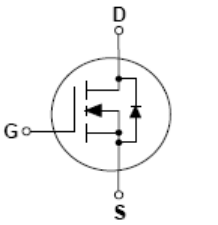
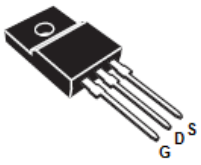
N-Channel Enhancement Mode Field Effect Transistor BL8N40F

FEATURES

- RDS(ON) =1.2Ω@VGS = 10V.
- Ultra Low gate charge (typical 28nC)
- Low reverse transfer capacitance (CRSS = typical 12.0 pF)
- Fast switching capability
- Avalanche energy specified
- Improved dv/dt capability, high ruggedness

Pb Lead-free





ITO-220AB

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	Units
V_{DS}	Drain-Source voltage	400	V
V_{GS}	Gate -Source voltage	±30	V
I_D	Continuous Drain current T_C=25℃	8	A
E_{AS}	Single Pulse Avalanche Energy(Note2)	320	mJ
E_{AR}	Avalanche Energy,Repetitive(Note1)	2.5	mJ
P_D	Power Dissipation	39	W
	Derate above 25°C	0.312	W/°C
$R_{\theta JC}$	Junction-to-Case	3.18	℃/W
$R_{\theta JA}$	Junction-to-Ambient	62.5	℃/W
T_J, T_{stg}	Junction and Storage Temperature	-55 to +150	℃
T_L	Maximum Temperature for Soldering	+150	℃

Note: 1.Absolute maximum ratings are those values beyond which the device could be permanently damaged.Absolute maximum ratings are stress ratings only and functional device operation is nimplied.

2.Repetitive Rating: Pulse width limited by maximum junction temperature

3.L = 10mH, IAS = 8A, VDD = 50V, RG = 25Ω, Starting TJ = 25°C

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V,I_D=250μA	400	-	-	V
Bvdss Temperature Coefficient	$\triangle BV_{DSS}/\triangle T_J$	I_D=250mA, Reference to 25°C,	-	0.4	-	V/℃
Gate Threshold Voltage	$V_{GS(TH)}$	V_{DS}= V_{GS}, I_D =250μA	2.0		4.0	V
Drain to Source Leakage Current	I_{DSS}	V_{DS}=400V, V_{GS}=0V	-	-	10	uA
Static drain-Source on-resistance	$R_{DS(ON)}$	V_{GS}=10V,I_D=4A	-	0.68	0.82	Ω
Gate-body Leakage Forward Reverse	I_{GSS}	V_{GS}=±30V			±100	nA
Input Capacitance	C_{iss}	V_{GS} = 0V V_{DS} = 25V f = 1.0MHz (Note 1, 2)	-	-	1600	pF
Output Capacitance	C_{oss}		-	-	450	
Reverse Transfer Capacitance	C_{rss}		-	-	150	
Turn-on Delay Time	$td_{(ON)}$	VDD=200V, ID=8A, RG=25Ω (Note 1, 2)	-	-	35	ns
Rise Time	tr		-	-	15	
Turn-Off Delay Time	$td_{(OFF)}$		-	-	90	
Fall Time	tf		-	-	35	

Note: 1. Pulse Test: Pulse width ≤ 300μs, Duty cycle ≤ 2%
2. Essentially independent of operating temperature

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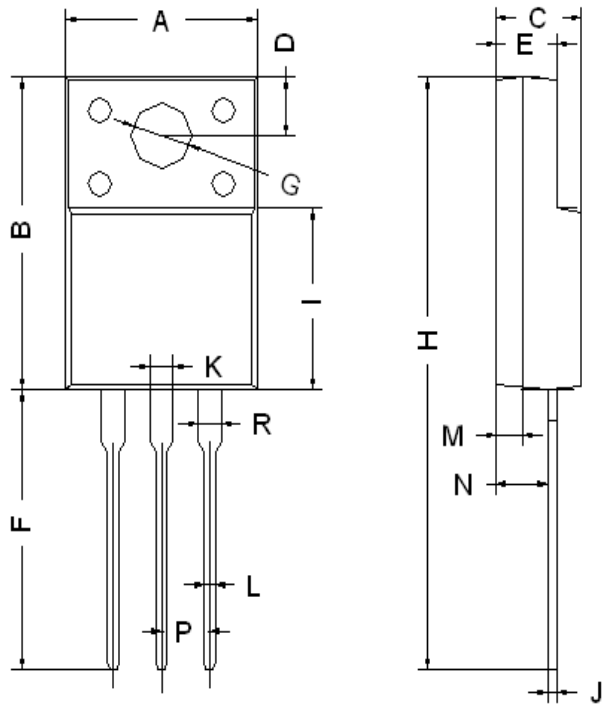
PACKAGE OUTLINE

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		