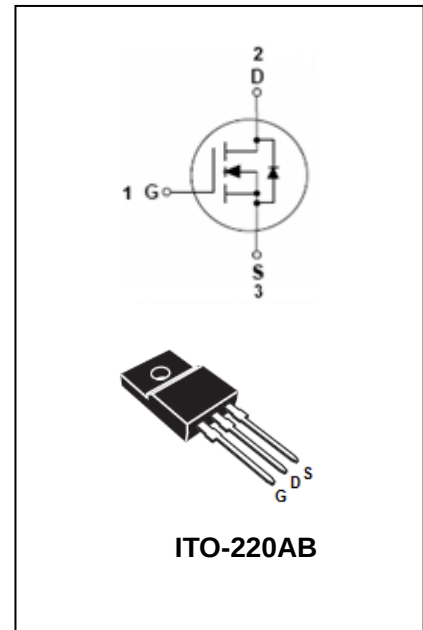


6A,800V N-Channel Power Mosfet

BL6N80F

FEATURES

- 6A, 800V, $R_{DS(on)} = 2.5\Omega$ @ $V_{GS} = 10\text{ V}$
- Improved dv/dt Capability
- Fast Switching
- 100% Avalanche Tested



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

Symbol	Parameter	Value	Units
V_{DSS}	Drain-Source voltage	800	V
V_{GSS}	Gate -Source voltage	± 30	V
I_D	Continuous Drain Current	6	A
I_{DM}	Pulsed Drain Current	22	A
E_{AS} E_{AR}	Avalanche Energy Single Pulsed Repetitive	680 15.8	mJ
dv/dt	Peak Diode Recovery dv/dt	4.5	V/ns
P_D	Power Dissipation	51	W
θ_{JA}	Junction to Ambient	62.5	$^\circ\text{C/W}$
θ_{JC}	Junction to Case	2.45	$^\circ\text{C/W}$
T_J	Junction Temperature	+150	$^\circ\text{C}$
T_{OPR}, T_{stg}	Operating and Storage Temperature	-55 to +150	$^\circ\text{C}$

6A,800V N-Channel Power Mosfet

BL6N80F

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	800	-	-	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =800V, V _{GS} =0V	-	-	10	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	3.0	-	5.0	V
Static drain-Source on-resistance	R _{DS(ON)}	V _{GS} =10V, I _D =3A	-	1.6	2.5	Ω
Forward Transconductance	g _{FS}	V _{DS} =50V, I _D =3A		5.4		S
DYNAMIC CHARACTERISTICS						
Input capacitance	C _{ISS}	V _{DS} =25V, V _{GS} =0V, f=1.0MHz	-	1010	1310	pF
Output capacitance	C _{OSS}		-	90	115	
Reverse transfer capacitance	C _{RSS}		-	8	11	
SWITCHING CHARACTERISTICS						
Turn-On Delay Time	t _{D(ON)}	V _{DD} = 400V, I _D = 6A, R _G = 25Ω	-	26	60	ns
Rise Time	t _r		-	65	140	ns
Turn-Off Delay Time	t _{D(OFF)}		-	47	105	ns
Fall Time	t _f		-	44	90	ns
Total Gate Charge	Q _g	V _{DS} =640V	-	21	30	nC
Gate–Source Charge	Q _{gs}	I _D = 6A	-	6	-	nC
Gate–Drain Charge	Q _{gd}	V _{GS} = 10V,	-	9	-	nC
SOURCE- DRAIN DIODE RATINGS AND CHARACTERISTICS						
Drain-Source diode forward voltage	V _{SD}	V _{GS} =0V, I _s =6A	-	-	1.4	V
Maximum Continuous Drain-Source Diode Forward Current	I _s		-	-	6	A
Maximum Pulsed Drain-Source Diode Forward Current	I _{SM}		-	-	22	A
Body Diode Reverse Recovery Time	t _{rr}	V _{GS} =0V ,I _s =6A, dI/dt=100A/ μ s	-	615	-	nS
Body Diode Reverse Recovery Charge	Q _{rr}		-	5.4	-	uC

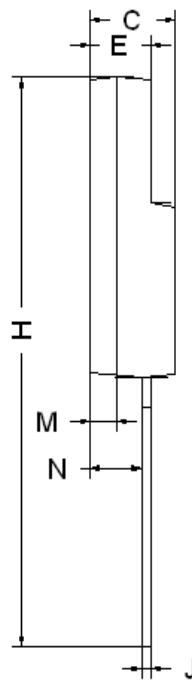
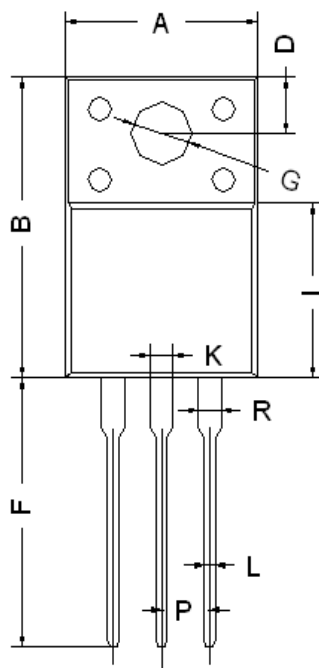
6A,800V N-Channel Power Mosfet

BL6N80F

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		