

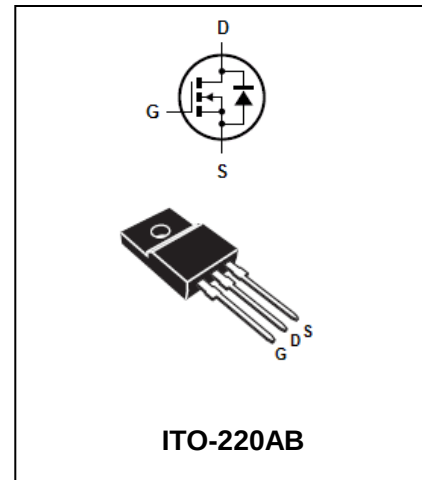
Silicon N-Channel Power MOSFET

BL12N65F

FEATURES

- Fast Switching
- ESD Improved Capability
- Low Gate Charge (Typical Data:38nC)
- Low Reverse transfer capacitances(Typical:15pF)
- 100% Single Pulse avalanche energy Test

HF



APPLICATIONS

- Power switch circuit of adaptor and charger.

Ordering Information

Part Number	Package	Shipping	Marking Code
BL12N65F	ITO-220AB	50 pcs / Tube	12N65F

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V_{DSS}	Drain-to-Source voltage	650	V
V_{GS}	Gate -Source voltage	± 30	V
I_D	Continuous Drain current Continuous Drain current $T_c=100^\circ\text{C}$	12 7.5	A
I_{DM}^{a1}	Pulsed Drain current	48	A
E_{AS}	Single Pulse Avalanche Energy	550	mJ
P_D	Power Dissipation	42	W
T_J, T_{stg}	Operating Junction and Storage Temperature	150, -55 to +150	$^\circ\text{C}$

a1: Repetitive rating; pulse width limited by maximum junction temperature

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

OFF Characteristics						
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	V_{DSS}	$V_{GS}=0V, I_D=250\mu A$	650	-	-	V
Drain to Source Leakage Current	I_{DSS}	$V_{DS}=650V, V_{GS}=0V$	-	-	1	μA
Gate to Source Forward Leakage	$I_{GSS(F)}$	$V_{GS}=30V$	-	-	0.1	μA
Gate to Source Reverse Leakage	$I_{GSS(R)}$	$V_{GS}=-30V$	-	-	-0.1	μA

ON Characteristics						
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-to-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=10V, I_D=6A$	-	0.66	0.8	Ω
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	2.0	-	4.0	V

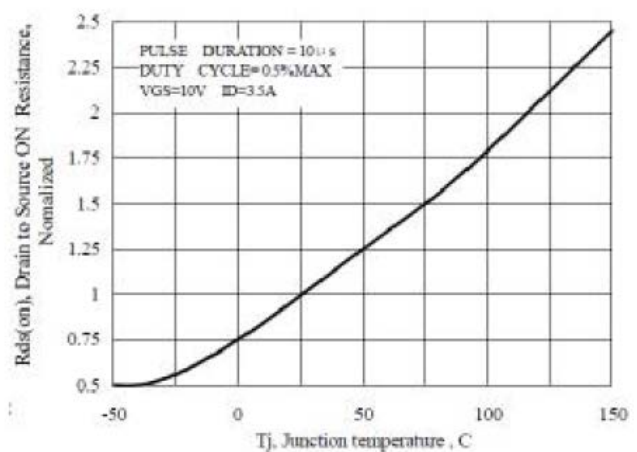
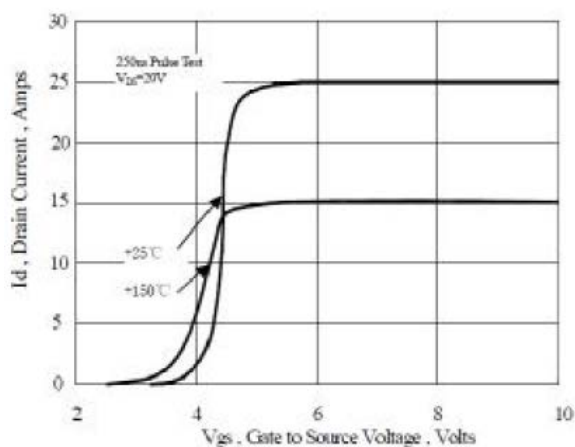
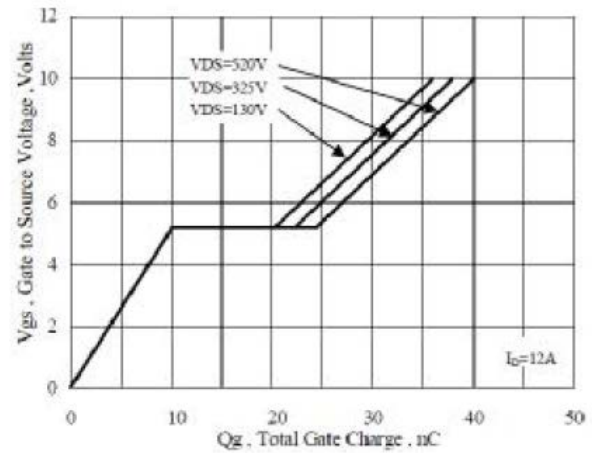
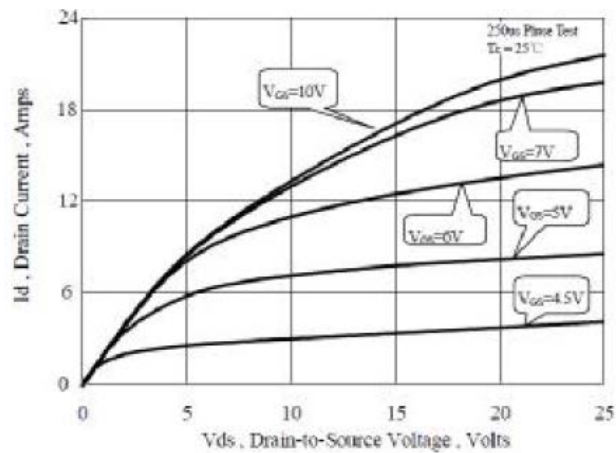
Dynamic Characteristics						
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Input Capacitance	C_{iss}	$V_{GS}=0V, V_{DS}=25V, f=1.0MHz$	-	1993	-	pF
Output Capacitance	C_{oss}		-	160	-	
Reverse Transfer Capacitance	C_{rss}		-	9.5	-	

Source-Drain Diode Characteristics						
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Continuous Source Current(Body Diode)	I_S	Ta=25°C	-	-	10	A
Maximum Pulsed Current(Body Diode))	I_{SM}		-	-	40	A
Diode Forward Voltage	V_{SD}	$I_S=12.0A, V_{GS}=0V$	-		1.5	V

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TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



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PACKAGE OUTLINE

Plastic surface mounted package

ITO-220AB

