

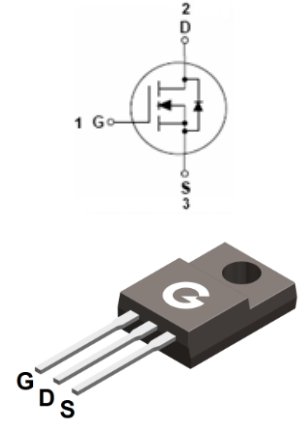
Features

- Ultra Low gate charge
- Low reverse transfer capacitance
- Fast switching capability
- Avalanche energy specified
- Improved dv/dt capability, high ruggedness

HF

Mechanical Data

- Case: ITO-220AB
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208



ITO-220AB

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
BL3N90F	ITO-220AB	50 pcs / Tube	3N90F

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-to-Source Voltage	V _{DSS}	900	V
Gate-to-Source Voltage	V _{GSS}	±30	V
Continuous Drain Current (T _C = 25°C)	I _D	3	A
Pulsed Drain Current	I _{DM}	12	A
Single Pulse Avalanche Energy *1	E _{AS}	24	mJ

Thermal Characteristics

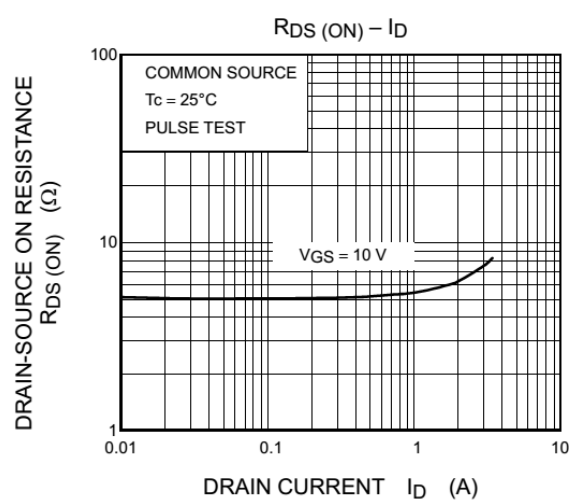
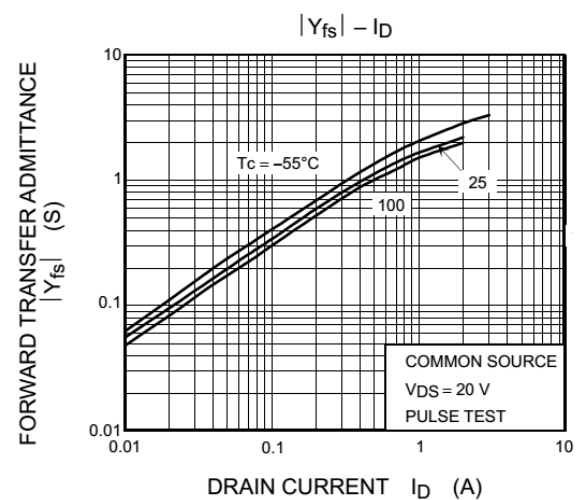
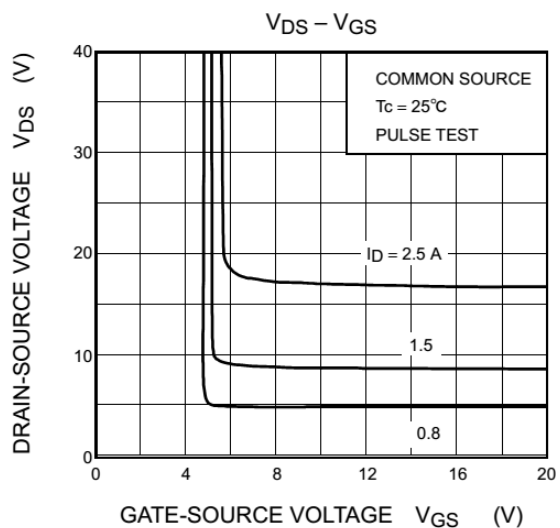
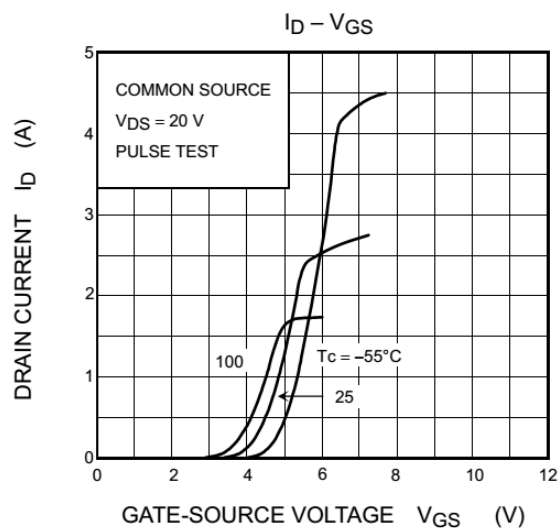
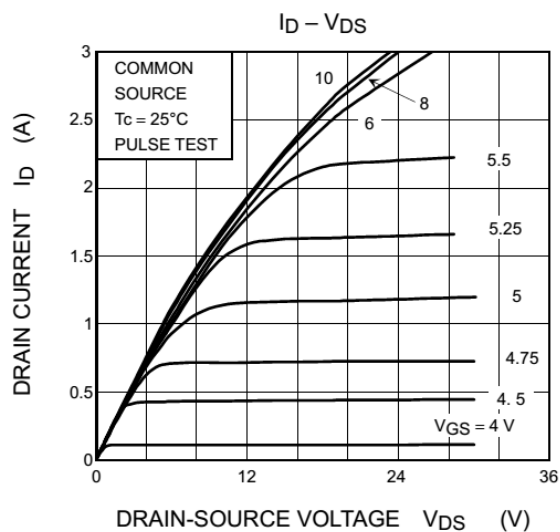
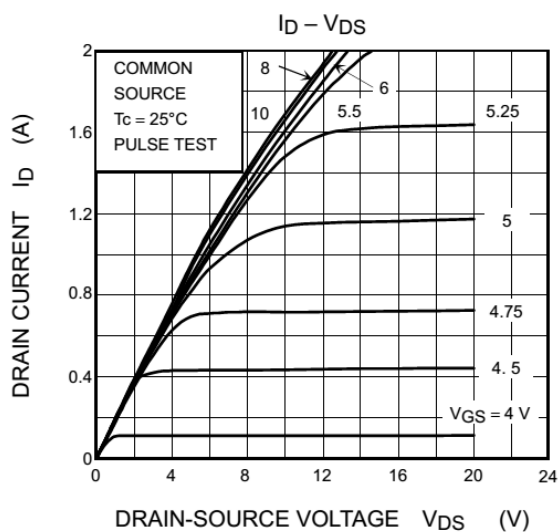
Parameter	Symbol	Value	Unit
Power Dissipation (T _C = 25°C)	P _D	30	W
Thermal Resistance Junction-to-Air	R _{θJA}	100	°C/W
Thermal Resistance Junction-to-Case	R _{θJC}	4.17	°C/W
Operating Junction Temperature Range	T _J	-55 ~ +150	°C
Storage Temperature Range	T _{STG}	-55 ~ +150	°C

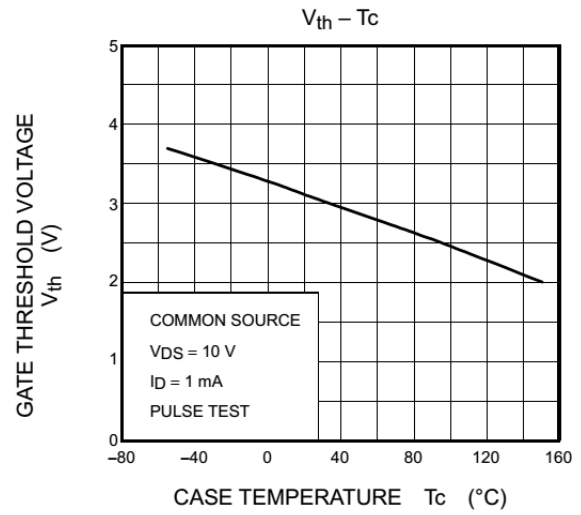
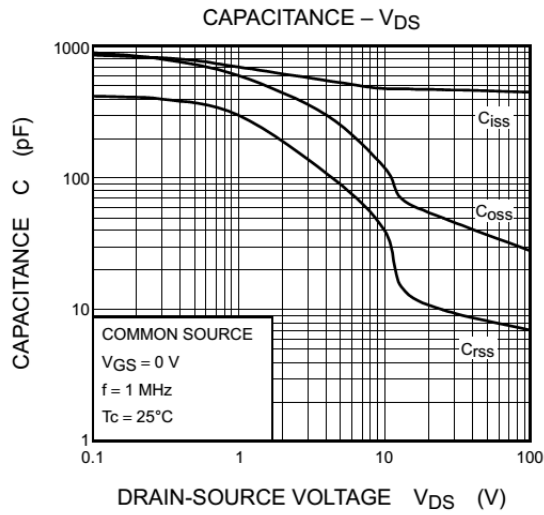
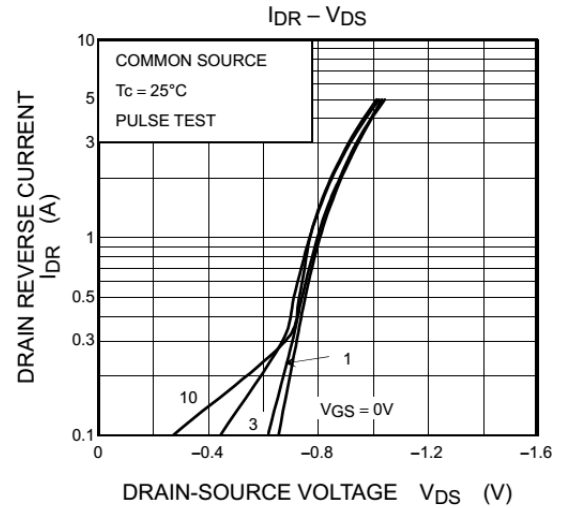
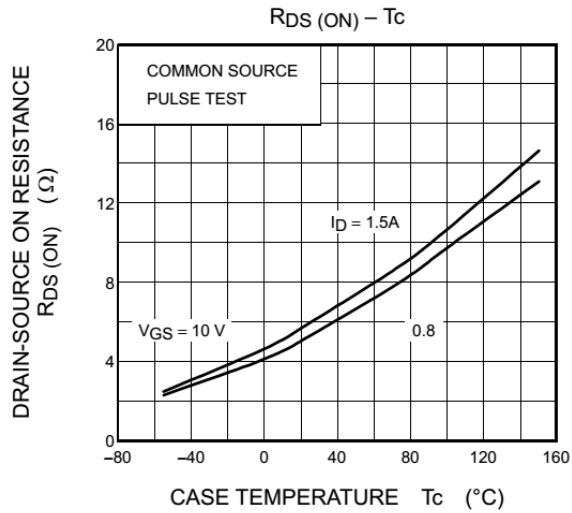
Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
V _{DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0V, I _D = 250μA	900	-	-	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 900V, V _{GS} = 0V	-	-	1	μA
I _{GSS}	Gate-Body Leakage Current	V _{GS} = ±30V, V _{DS} = 0V	-	-	±100	nA
On Characteristics						
R _{DS(ON)}	Static Drain-Source On-resistance	V _{GS} = 10V, I _D = 1.5A	-	-	5.5	Ω
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} , I _D = 250μA	2	-	4	V
Dynamic Characteristics						
C _{ISS}	Input Capacitance	V _{GS} = 0V	-	480	-	pF
C _{OSS}	Output Capacitance	V _{DS} = 25V	-	43	-	
C _{RSS}	Reverse Transfer Capacitance	f = 1.0MHz	-	7	-	
Switching Characteristics						
t _{d(ON)}	Turn-on Delay Time	V _{DD} = 450V	-	11	-	ns
t _r	Turn-on Rise Time	V _{GS} = 10V	-	14	-	
t _{d(OFF)}	Turn-Off Delay Time	R _G = 25Ω	-	44	-	
t _f	Turn-Off Fall Time	I _D = 3A	-	26	-	
Q _G	Total Gate-Charge	V _{DD} = 450V	-	15	-	nC
Q _{GS}	Gate to Source Charge	I _D = 3A	-	2.5	-	
Q _{GD}	Gate to Drain (Miller) Charge	V _{GS} = 10V	-	6	-	
Source-Drain Diode Characteristics						
V _{SD}	Diode Forward Voltage	I _{SD} = 3A, V _{GS} = 0V	-	-	1.5	V
I _S	Continuous Source Current(Body Diode)		-	-	3	A
I _{SM}	Maximum Pulsed Current (Body Diode)		-	-	12	A
trr	Reverse Recovery Time	I _S = 3.0A, d _I F / d _t = 100A/μs	-	140	-	ns
Qrr	Reverse Recovery Charge	V _{GS} = 0V	-	530	-	nC

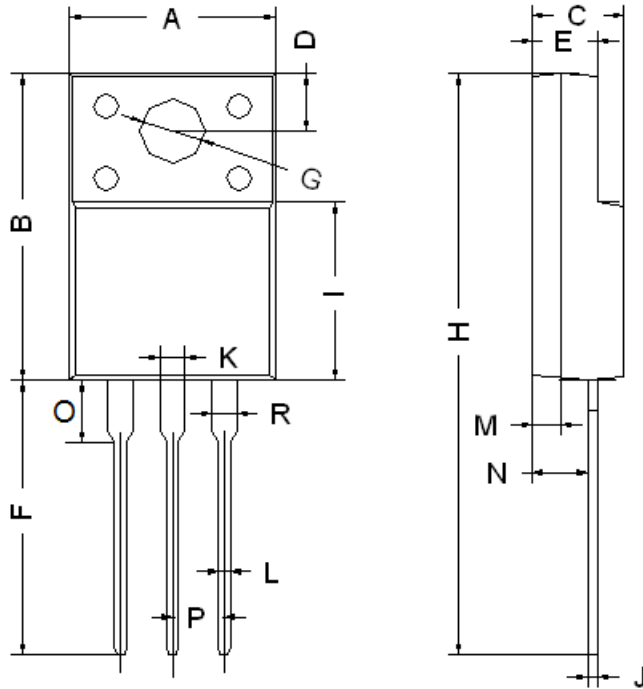
Note 1: Limited by T_{Jmax} , starting $T_J = 25^\circ\text{C}$, $L = 10mH$, $V_{DS} = 50V$, $V_{GS} = 15V$

Ratings and Characteristics Curves (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)





Package Outline Dimensions (Unit: mm)



ITO-220AB		
Dimension	Min.	Max.
A	9.90	10.30
B	14.80	15.20
C	4.30	4.70
D	2.50	2.90
E	2.80	3.30
F	13.00	13.60
G	3.10	3.30
H	28.00	28.60
I	7.90	8.90
J	0.40	0.60
L	0.70	0.90
M	1.30	1.50
N	2.60	2.80
O	2.60	3.10
P	2.45	2.65
K/R	1.10	1.30

IMPORTANT NOTICE

Changzhou Galaxy Century Microelectronics (GME) reserves the right to make changes without further notice to any product information (copyrighted) herein to make corrections, modifications, improvements, or other changes. GME does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others.