

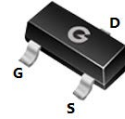
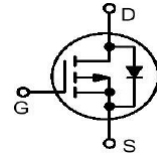
Features

- $R_{DS(on)} = 150m\Omega_{(MAX)} @ V_{GS} = -10V$.
- $R_{DS(on)} = 200m\Omega_{(MAX)} @ V_{GS} = -4.5V$.

HF

Mechanical Data

- Case: SOT-23.
- Molding Compound, UL Flammability Classification Rating 94V-0.
- Terminals: Matte Tin Plated Leads, Solderable Per MIL-STD-202, Method 208.



BL6202

SOT-23

Ordering Information

Part Number	Package	Shipping	Marking Code
BL6202	SOT-23	3000pcs / Tape & Reel	D1

Maximum Ratings (@ $T_A=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Value	Units
Drain-Source Voltage	V_{DSS}	-60	V
Gate -Source Voltage	V_{GSS}	± 20	V
Continuous Drain Current	I_D	-1.9	A
Pulsed Drain Current , $PW \leq 300 \mu s$, Duty Cycle $\leq 2\%$	I_{DM}	-7.6	A
Power Dissipation $T_A=25^{\circ}C$	P_D	0.35	W

Thermal Characteristics

Parameter	Symbol	Limits	Unit
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	357	$^{\circ}C/W$
Thermal Resistance Junction to Lead	$R_{\theta JL}$	214	$^{\circ}C/W$
Thermal Resistance Junction to Case	$R_{\theta JC}$	180	$^{\circ}C/W$
Operating Junction Temperature Range	T_J	-55 to +150	$^{\circ}C$
Storage Temperature Range	T_{STG}	-55 to +150	$^{\circ}C$

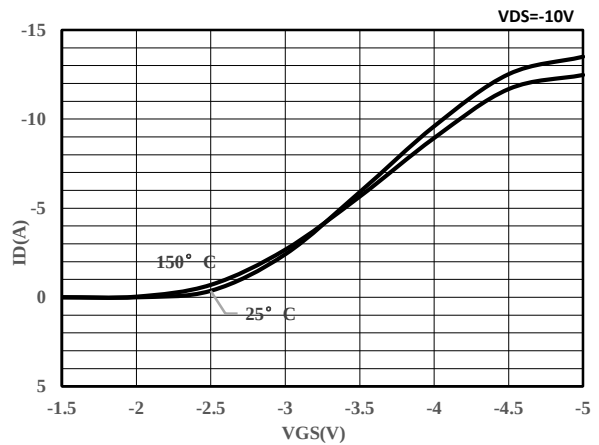
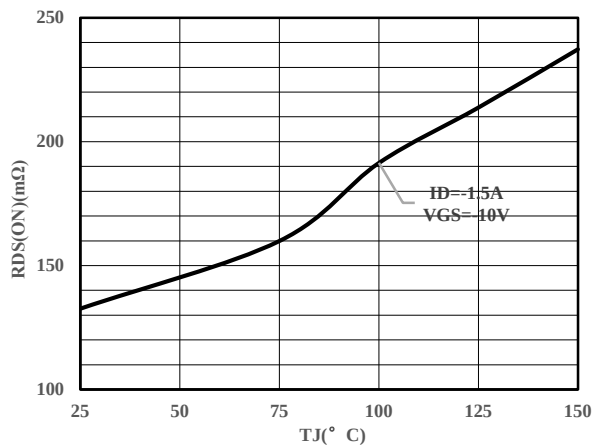
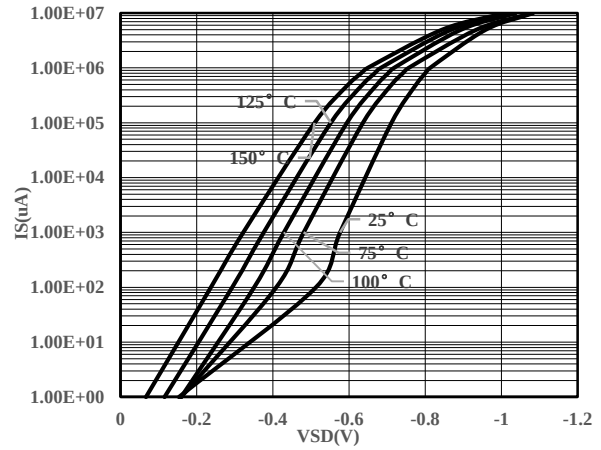
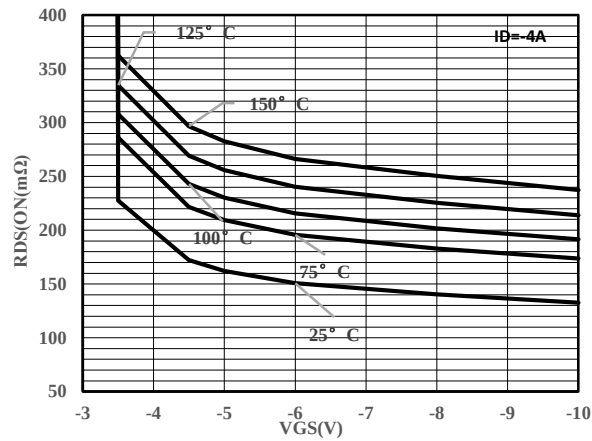
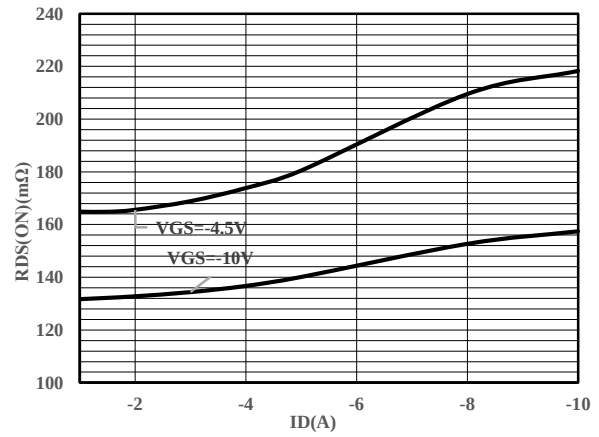
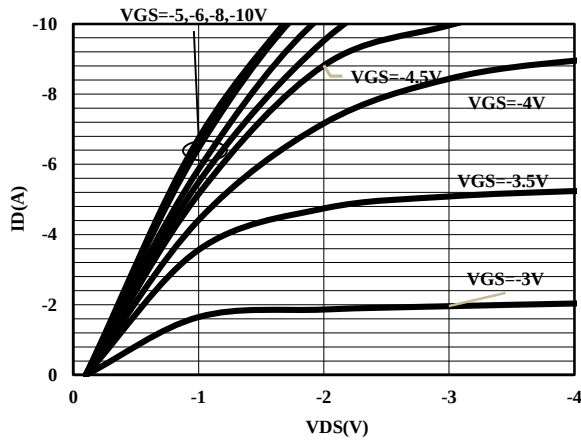
Electrical Characteristics (@T_A=25°C unless otherwise specified)

Symbol	Parameter	Test conditions	MIN	TYP	MAX	UNIT
OFF Characteristics						
V _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V, I _D =-250μA	-60	-	-	V
I _{DSS}	Drain to Source Leakage Current	V _{DS} =-48V, V _{GS} =0V	-	-	-1	uA
I _{GSS}	Gate-body Leakage	V _{GS} =±20V, V _{DS} =0V	-	-	±100	nA
ON Characteristics ^(NOTE2)						
R _{DS(ON)}	Static Drain-Source On-resistance	V _{GS} =-10V, I _D =-1.5A	-	131	150	mΩ
		V _{GS} =-4.5V, I _D =-1A	-	165	200	
V _{GS(TH)}	Gate Threshold Voltage	V _{DS} = V _{GS} , I _D =-250uA	-1	-1.9	-3	V
Dynamic Characteristics ^(NOTE3)						
C _{iss}	Input Capacitance	V _{GS} = 0V	-	619	-	pF
C _{oss}	Output Capacitance	V _{DS} = -15V	-	57	-	
C _{rss}	Reverse Transfer Capacitance	f = 1.0MHz	-	40	-	
Q _g	Total Gate Charge	V _{GS} = -10V	-	12	-	nC
Q _{gs}	Gate-Source Charge	V _{DS} = -20V	-	4.6	-	
Q _{gd}	Gate-Drain Charge	I _D = -1.5A	-	1.2	-	
t _{d(on)}	Turn-On Delay Time	V _{GS} = -10V	-	17.4	-	ns
t _r	Rise Time	V _{DD} = -15V	-	5.4	-	
t _{d(off)}	Turn-Off Delay Time	I _D = -1A	-	37.2	-	
t _f	Fall Time	R _G =3.3Ω	-	2.4	-	
Source-Drain Diode Characteristics						
V _{SD}	Diode Forward Voltage ^(NOTE1)	I _S =-1A, V _{GS} =0 V	-	-0.8	-1.4	V

NOTE:

- 1、 Surface Mounted on FR4 Board, t ≤ 10 sec
- 2、 Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.
- 3、 Guaranteed by design, not subject to production.

Ratings and Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)



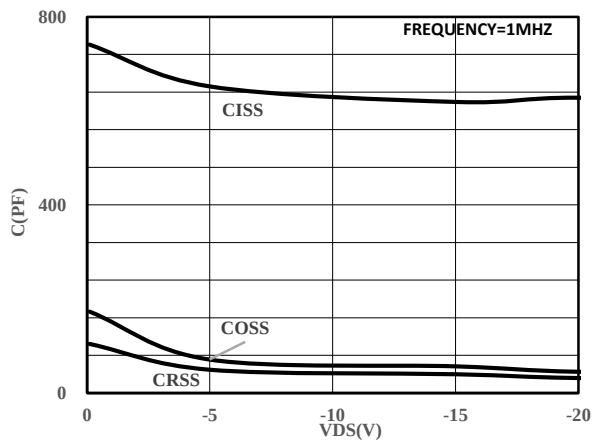


Fig.7-Capacitance Characteristics

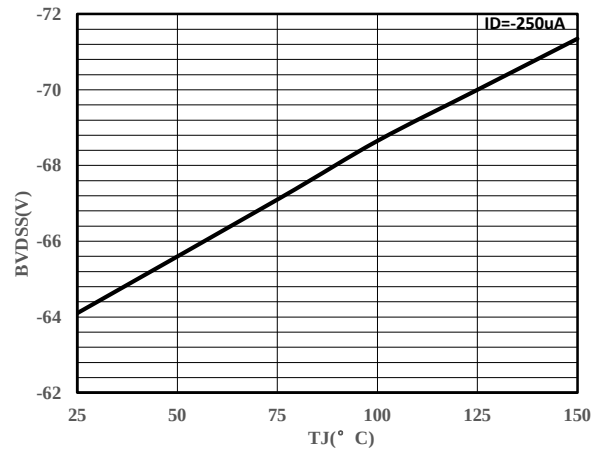


Fig.8- Drain-Source vs. Junction Temperature

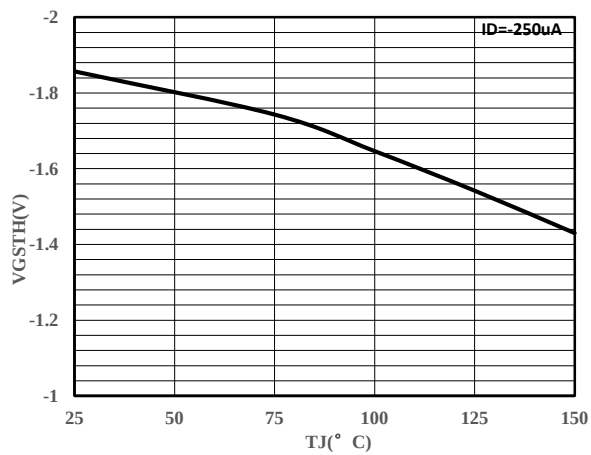
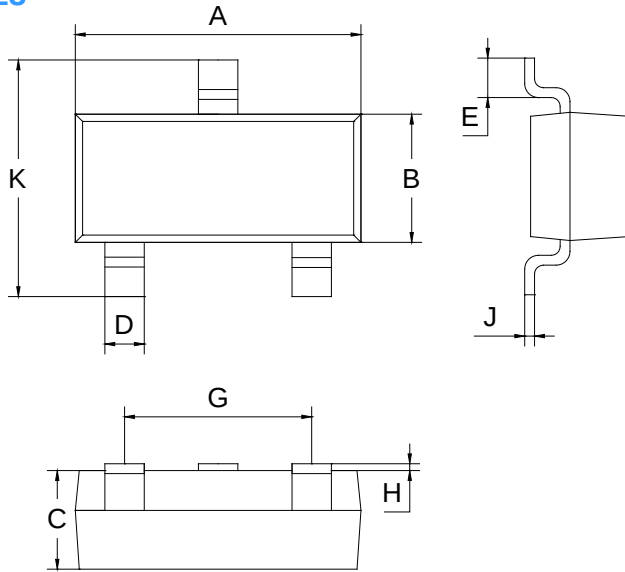


Fig.9- Gate Voltage vs. Junction Temperature

Package Outline Dimensions (unit: mm)

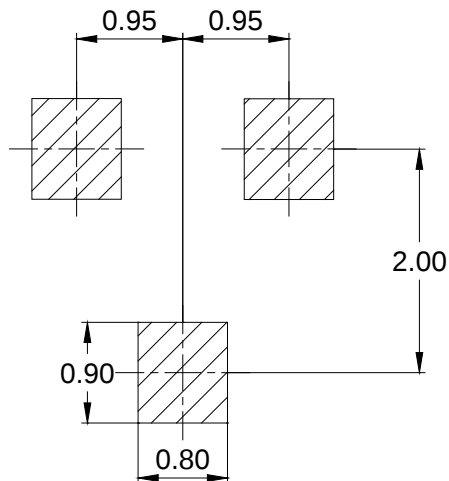
SOT-23



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Mounting Pad Layout (unit: mm)

SOT-23



IMPORTANT NOTICE

Galaxy Microelectronics (GME) reserves the right to make changes without further notice to any product 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.