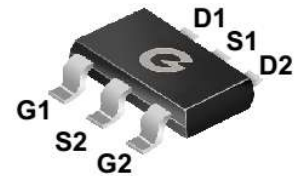
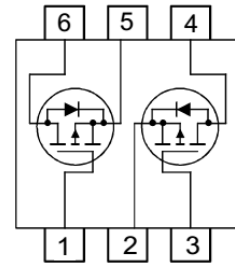


Features

- $R_{DS(ON)} \leq 100m\Omega @ V_{GS}=4.5V$.
- $R_{DS(ON)} \leq 135m\Omega @ V_{GS}=2.5V$.
- High-speed switching.
- Drive circuits can be simple.
- Parallel use is easy.



BL6312P

SOT-23-6L

Typical Applications

- Power management in note book.
- Switching application.
- Battery powered system.
- Load switch.

Mechanical Data

- Case: SOT-23-6L.
- Molding Compound, UL Flammability Classification Rating 94V-0.
- Terminals: Matte Tin Plated Leads, Solderable Per MIL-STD-202, Method 208.

Ordering Information

Part Number	Package	Shipping	Marking Code
BL6312P□	SOT-23-6L	3000/Tape&Reel	312

□: none is for Lead Free package;

“G” is for Halogen Free package.

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

Parameter	Symbol	Value	Units
Drain-Source Voltage	V_{DSS}	-20	V
Gate -Source Voltage	V_{GSS}	± 12	V
Continuous Drain Current $T_A=25^\circ C$	I_D	-2.6	A
Power Dissipation ^(NOTE1) $T_A=25^\circ C$	P_D	0.7	W

Thermal Characteristics

Parameter	Symbol	Limits	Unit
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	179	$^\circ C/W$
Operating Junction Temperature Range	T_j	150	$^\circ C$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ C$

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

Symbol	Parameter	Test conditions	MIN	TYP	MAX	UNIT
OFF Characteristics						
V_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	-20	-	-	V
I_{DSS}	Drain to Source Leakage Current	$V_{DS}=20V, V_{GS}=0V$	-	-	-1	μA
I_{GSS}	Gate-body Leakage	$V_{GS}=\pm 12V, V_{DS}=0V$	-	-	± 100	nA
ON Characteristics (NOTE2)						
$R_{DS(ON)}$	Static Drain-Source On-resistance	$V_{GS}=4.5V, I_D=2.8A$	-	80	100	m Ω
		$V_{GS}=2.5V, I_D=2A$	-	115	135	
$V_{GS(TH)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}, I_D=250\mu A$	-0.5	-0.8	-1	V
Dynamic Characteristics (NOTE3)						
C_{iss}	Input Capacitance	$V_{GS}=0V$ $V_{DS}=-15V$ $f=1.0MHz$	-	822	-	pF
C_{oss}	Output Capacitance		-	58	-	
C_{rss}	Reverse Transfer Capacitance		-	52	-	
Source-Drain Diode Characteristics						
V_{SD}	Diode Forward Voltage(NOTE1)	$I_S=0.3A, V_{GS}=0V$	-	0.85	1.2	V
I_S	Diode Continuous Forward Current	$T_A=25^\circ\text{C}$	-	-	2.6	A

NOTE:

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

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

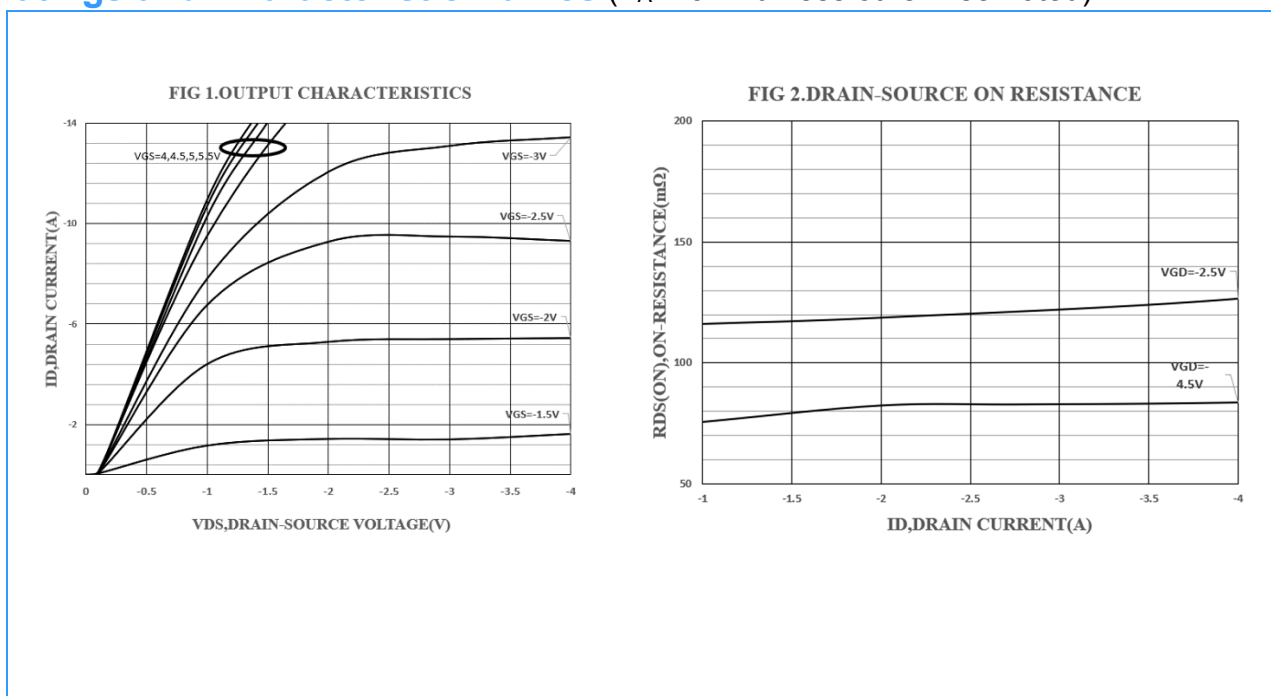


FIG 3.DRAIN-SOURCE ON RESISTANCE

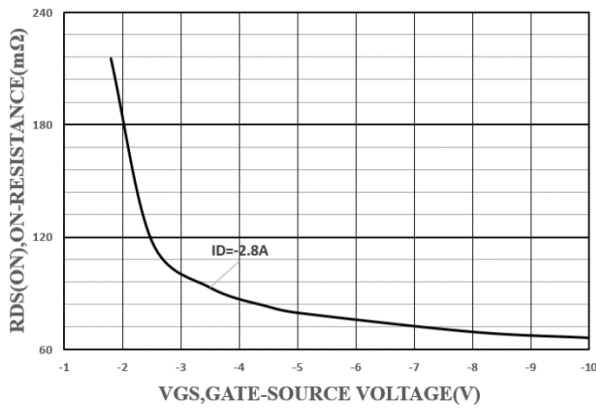


FIG 4.GATE THRESHOLD VOLTAGE

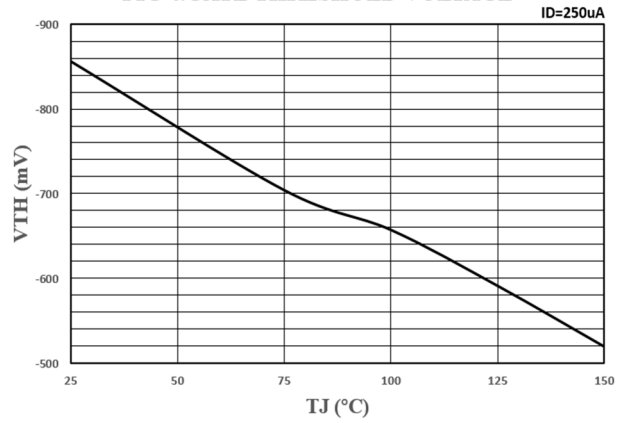


FIG 5.DRAIN-SOURCE ON RESISTANCE

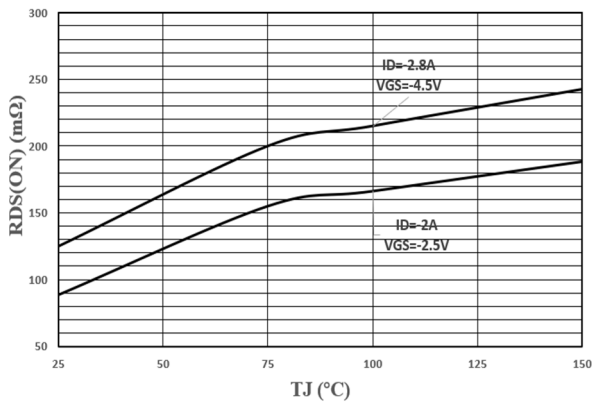
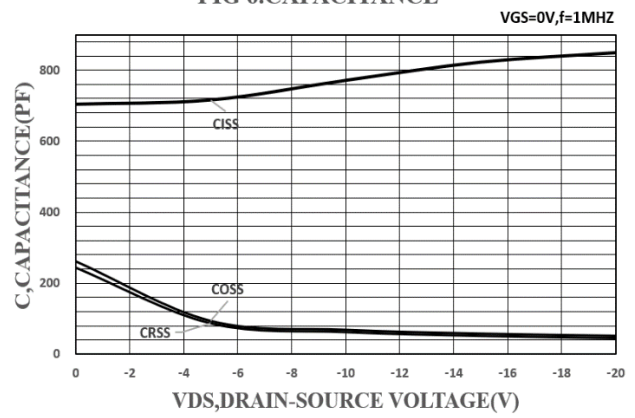
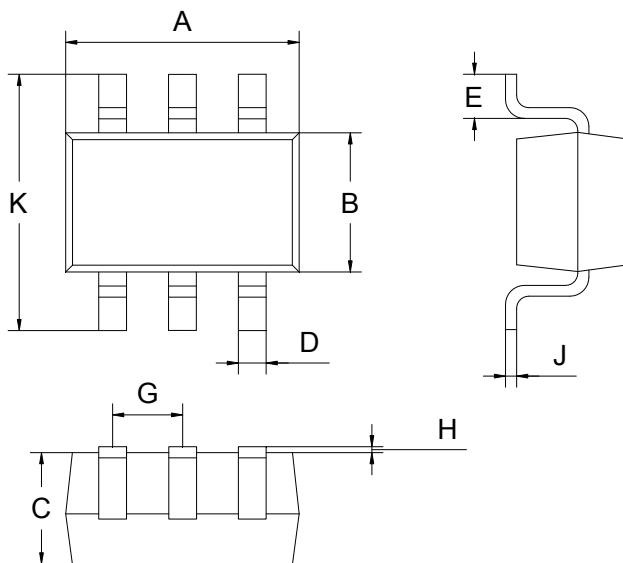


FIG 6.CAPACITANCE



Package Outline Dimensions(unit:mm)

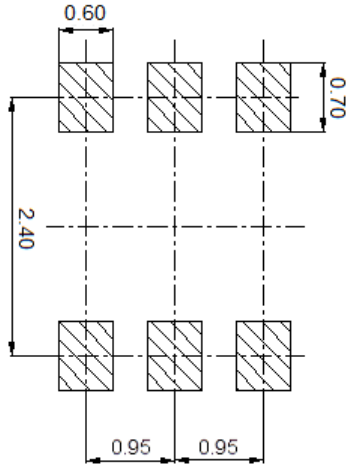
SOT-23-6L



SOT-23-6L		
Dim	Min	Max
A	2.80	3.00
B	1.50	1.70
C	1.00	1.20
D	0.35	0.45
E	0.35	0.55
G	0.90	1.00
H	0.02	0.10
J	0.10	0.20
K	2.60	3.00

Mounting Pad Layout(unit:mm)

SOT-23-6L



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