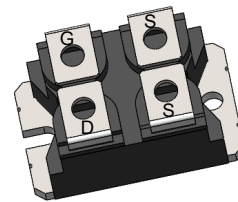


### Features

- Fast switching
- High input impedance
- Wide Safe operating area
- Good temperature stability
- ESD sensitive rating:1B

Product Summary			
V <sub>DS</sub>	R <sub>DS(on)</sub> (mΩ) Max	I <sub>D</sub> (A)	Q <sub>g</sub> (Max)
100V	2.3 @ 10V 60A	420	2100nc

SOT-227



### Mechanical Data

- Case:SOT-227 Package

### Application

- Power switching applications
- DC-DC Converters
- Full bridge control

### Block Diagram

Pin Definition:

- G. Gate
- D. Drain
- S. Source

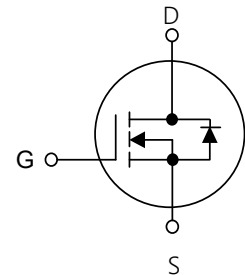


Table1 Absolute Maximum Ratings (T<sub>c</sub>=25°C, unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V <sub>DS</sub>	100	V
Gate-Source Voltage	V <sub>GS</sub>	±20	V
Continuous Drain Current T <sub>c</sub> =25°C	I <sub>D</sub>	420	A
Thermal resistance Junction to Case	R <sub>θJC</sub>	0.154	°C/W
Power Dissipation T <sub>c</sub> =25°C	P <sub>D</sub>	812	W
Operating Junction and Storage Temperature	T <sub>J</sub> /T <sub>STG</sub>	-55~+150	°C

**Electrical Characteristics** (T<sub>J</sub>=25°C, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	BV <sub>DSS</sub>	V <sub>GS</sub> =0V, I <sub>D</sub> =3mA	100	-	-	V
Drain-Source Leakage Current	I <sub>DSS</sub>	V <sub>DS</sub> =100V, V <sub>GS</sub> =0V	-	-	50	μA
Gate- Source Leakage Current	Forward	I <sub>GSS</sub>	-	-	200	nA
	Reverse				-200	nA
On Characteristics						
Gate Threshold Voltage	V <sub>GS(TH)</sub>	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =8mA	2.5	-	5.0	V
Static Drain-Source On-State Resistance	R <sub>DS(ON)</sub>	V <sub>GS</sub> =10V, I <sub>D</sub> =60A	-	-	2.3	mΩ
		V <sub>GS</sub> =10V, I <sub>D</sub> =200A	-	-	10	
Dynamic Characteristics						
Input Capacitance	C <sub>iss</sub>	V <sub>DS</sub> =25V, V <sub>GS</sub> =0V, f=1MHz	-	-	150	nF
Output Capacitance	C <sub>oss</sub>		-	-	20000	pF
Reverse Transfer Capacitance	C <sub>rss</sub>		-	-	3000	pF
Gate Resisitance			-	1.0	-	Ω
Switching Characteristics						
Total Gate Charge	Q <sub>G</sub>	V <sub>DD</sub> =50V, I <sub>D</sub> =210A, V <sub>GS</sub> =10V	-	-	2100	nC
Gate-Source Charge	Q <sub>GS</sub>		-	-	600	nC
Gate-Drain Charge	Q <sub>GD</sub>		-	-	600	nC

Typical Characteristics Diagrams

Figure 1. Output Characteristics

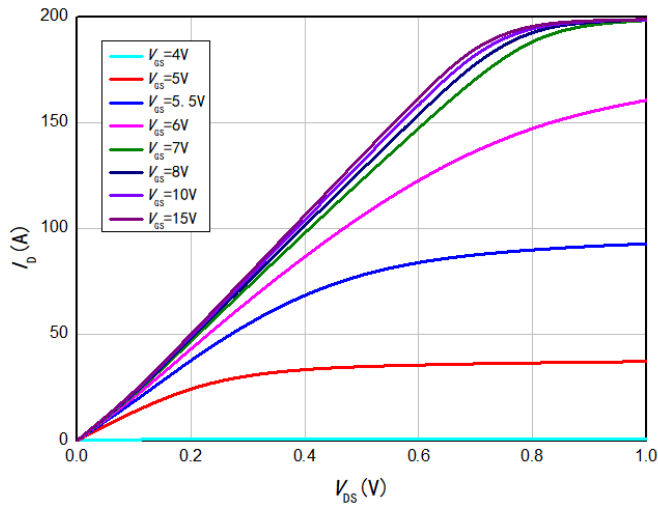


Figure 2. On-Resistance vs.  $V_{GS}$

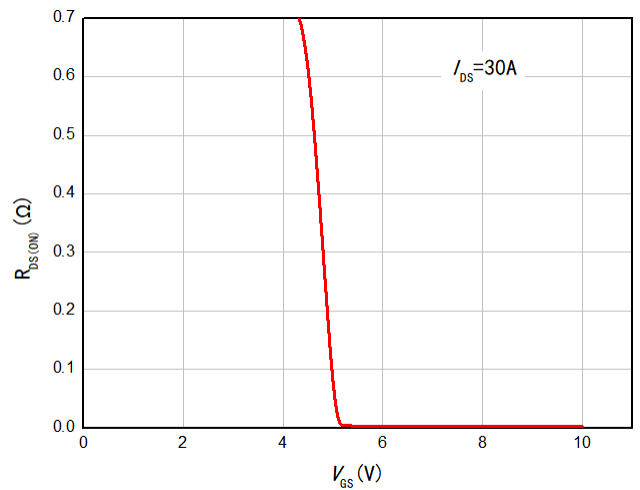


Figure 3. On-Resistance vs. Drain Current

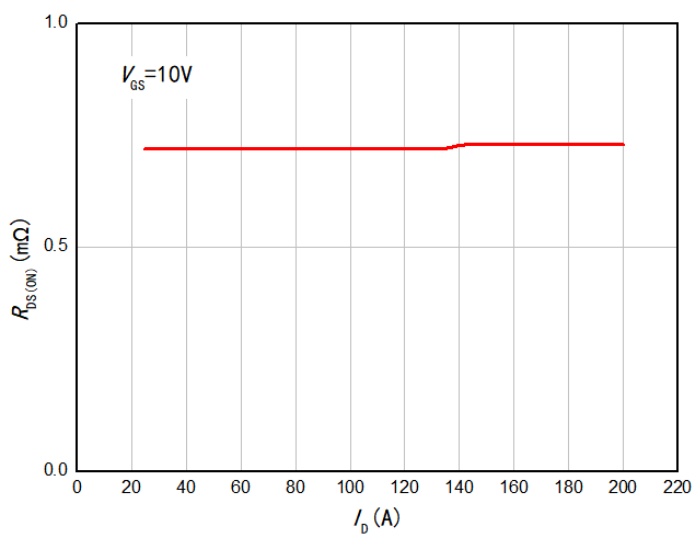


Figure 4. Capacitance

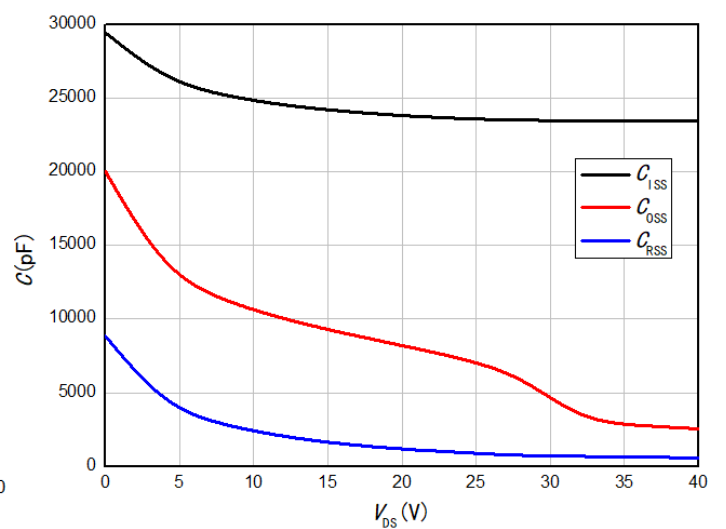


Figure 5. Gate charge

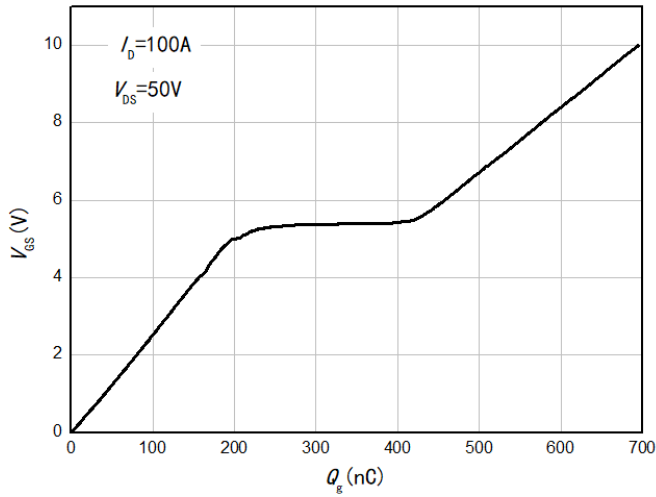


Figure 6. Source-Drain Diode Forward Voltage

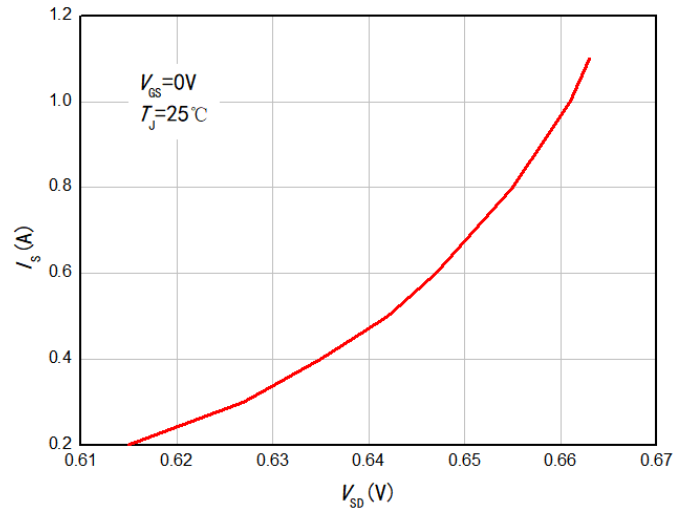
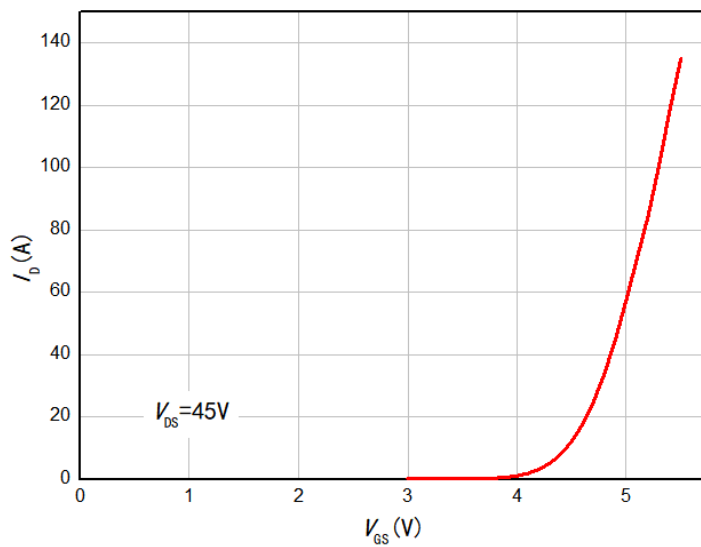
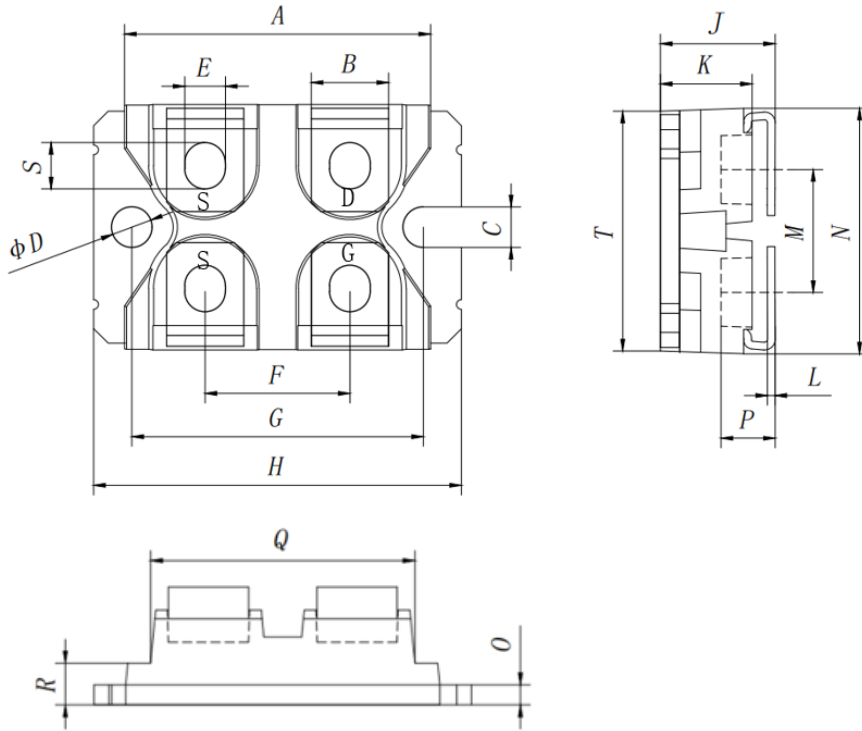


Figure 7.  $I_b$  vs  $V_{gs}$



Dimensions

SOT-227 PACKAGE OUTLINE DIMENSIONS



Symbol	MIN	MAX	Symbol	MIN	MAX
<i>A</i>	31.20	32.20	<i>L</i>	0.75	0.85
<i>B</i>	7.50	8.50	<i>M</i>	12.40	13.00
<i>C</i>	3.80	4.60	<i>N</i>	25.00	25.80
<i>D</i>	3.80	4.60	<i>O</i>	1.70	2.30
<i>E</i>	3.80	4.60	<i>P</i>	4.95	6.10
<i>F</i>	14.50	15.50	<i>Q</i>	26.40	27.00
<i>G</i>	29.80	30.60	<i>R</i>	3.90	4.45
<i>H</i>	37.70	38.50	<i>S</i>	4.20	5.40
<i>J</i>	11.50	12.30	<i>T</i>	23.80	25.80
<i>K</i>	8.90	10.00			

## Friendship Reminder

- JiNan JingHeng (hereinafter referred to as JH) reserves the right to make changes to this document and its products and specifications at anytime without notice.
- Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.
- JH makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does JH assume any liability for application assistance or customer product design.
- JH does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.
- No license is granted by implication or otherwise under any intellectual property rights of JH.
- JH's products are not authorized for use as critical components in life support devices or systems without express written approval of JH.