ZHEJIANG UNIU-NE Technology CO.,LTD

浙 江 宇 力 微 新 能 源 科 技 有 限 公 司

AP3402 Data Sheet

V 1.1

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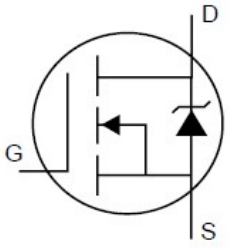
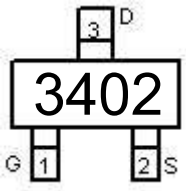
Description

The AP3402 designed by the trench processing techniques to achieve extremely low on-resistance. And fast switching speed and improved transfer effective . These features combine to make this design an extremely efficient and reliable device for variety of DC-DC applications.



Schematic diagram



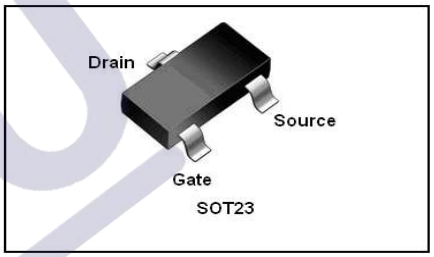
Marking and pin Assignment

Features

- Ron(typ.)=40mΩ @VGS=4.5V
- Ron(typ.)=35mΩ @VGS=10V
- Low On-Resistance
- 150°C Operating Temperature
- Fast Switching
- Lead-Free, RoHS Compliant

Application

- Battery protection
- Load switch
- Power management



Symbol	Parameter		Rating	Unit
Common Ratings (T_C=25°C Unless Otherwise Noted)				
V_{GS}	Gate-Source Voltage		±12	V
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage		30	V
T_J	Maximum Junction Temperature		150	°C
T_{STG}	Storage Temperature Range		-50 to 155	°C
I_S	Diode Continuous Forward Current	T_C=25°C	4.0	A
Mounted on Large Heat Sink				
I_{DM}	Pulse Drain Current Tested	T_C=25°C	15	A
I_D	Continuous Drain Current(VGS=10V)	T_C=25°C	4.0	A
		T_C=100°C	3.0	
P_D	Maximum Power Dissipation	T_C=25°C	1.25	W
$R_{\theta JA}$	Thermal Resistance Junction-Ambient		135	°C/W

Typical Electrical and Thermal Characteristics

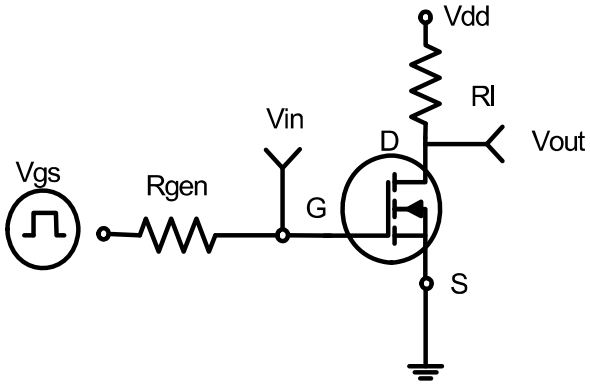


Figure 1:Switching Test Circuit

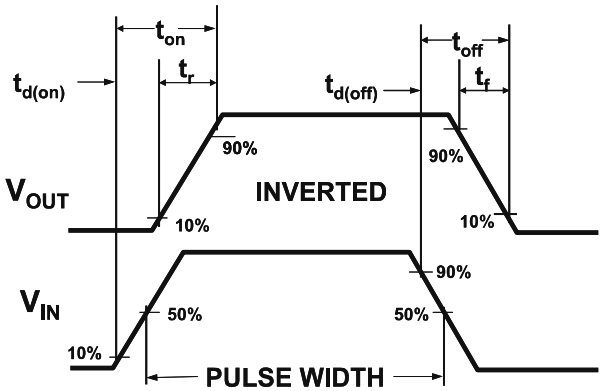


Figure 2:Switching Waveforms

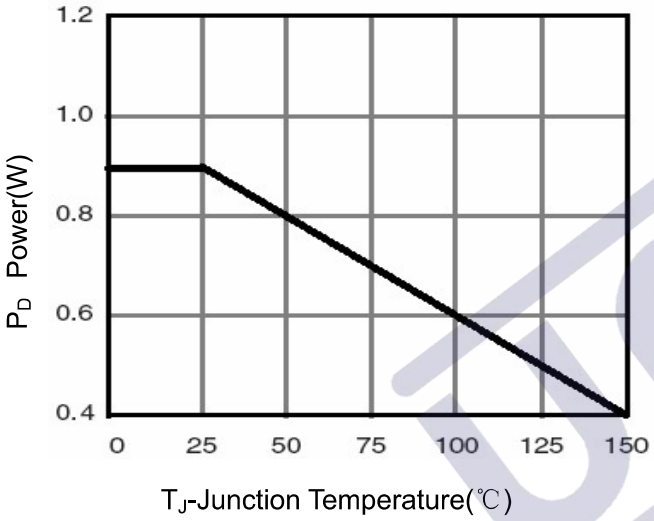


Figure 3 Power Dissipation

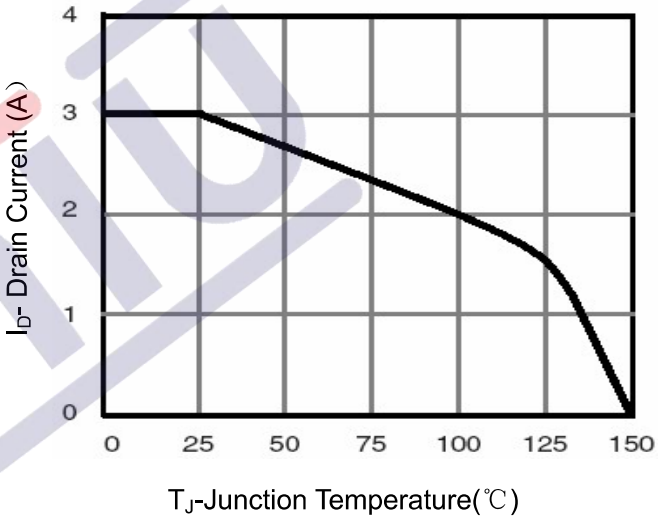


Figure 4 Drain Current

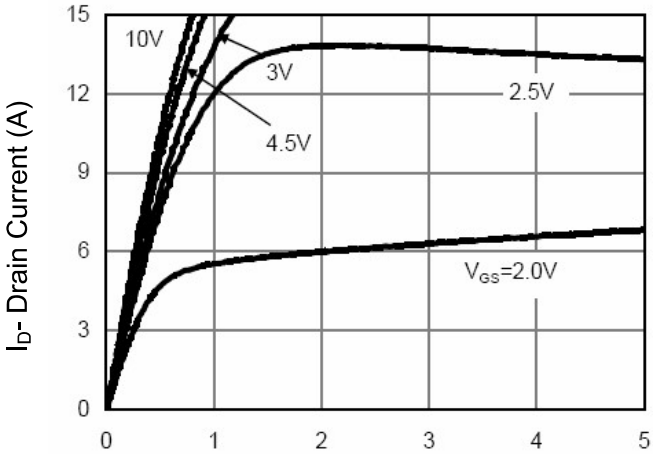


Figure 5 Output Characteristics

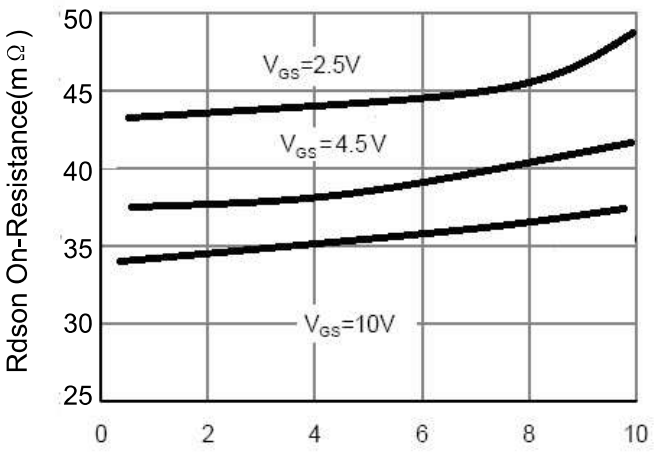


Figure 6 Drain-Source On-Resistance

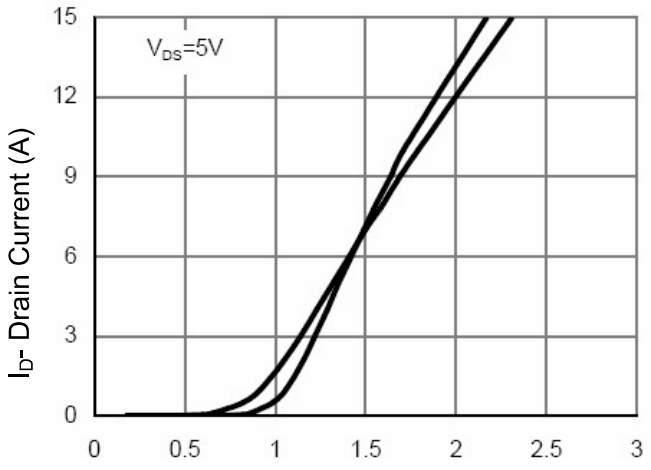


Figure 7 Transfer Characteristics

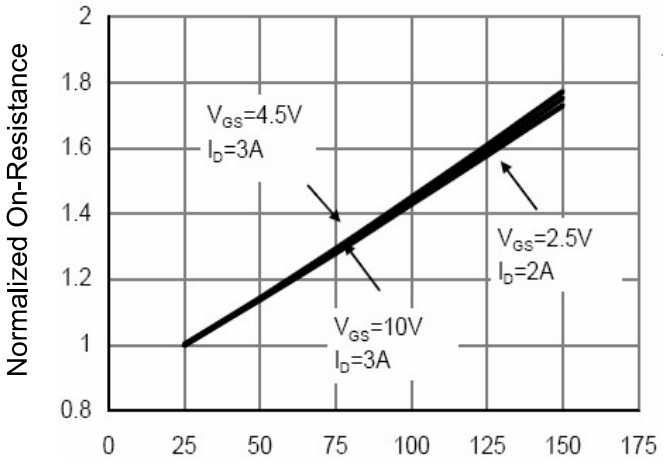


Figure 8 Drain-Source On-Resistance

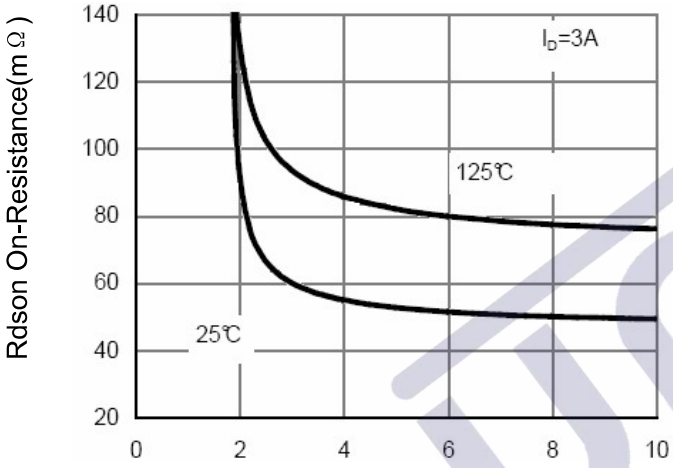


Figure 9 Rdson vs Vgs

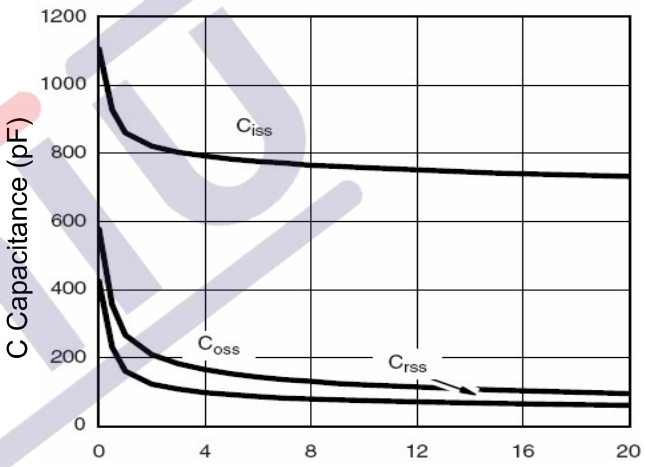


Figure 10 Capacitance vs Vds

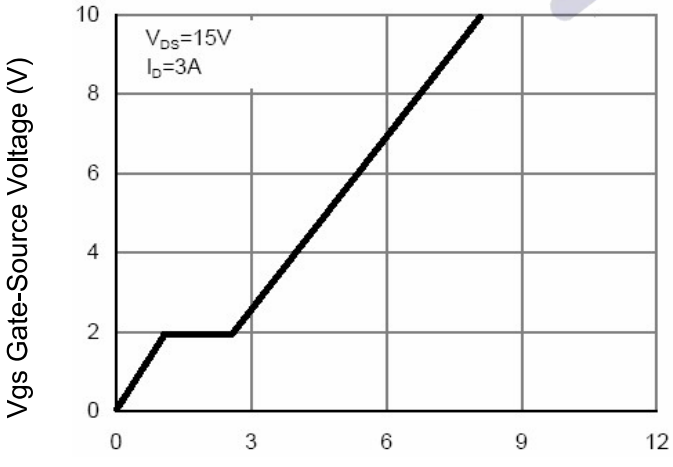


Figure 11 Gate Charge

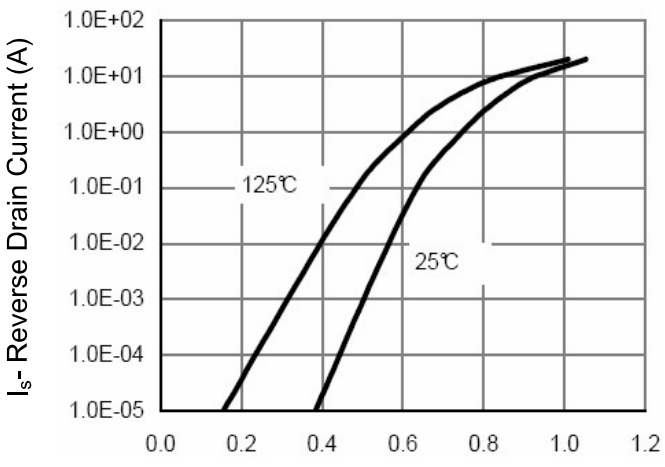


Figure 12 Source- Drain Diode Forward

1.版本记录

DATE	REV.	DESCRIPTION
2018/11/15	1.0	First Release
2020/06/18	1.1	Layout adjustment

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