N-Channel Enhancement Mode Field Effect Transistor

Product Summary

V_{DS}	60V
I_D	220A
$R_{DS(ON)}$(at V_{GS}=10V)	3m
$R_{DS(ON)}$(at V_{GS}=6V)	4m

100% EAS Tested

100% V_{DS} Tested

General Description

Double trench MOSFET technology

Excellent package for heat dissipation

High density cell design for low $R_{DS(ON)}$

Epoxy Meets UL 94 V-0 Flammability Rating

Halogen Free

Moisture Sensitivity Level 1

Applications

High Power switching application

BMS

Electrical Characteristics (T_J=25 unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	

Typical Electrical and Thermal Characteristics Diagrams

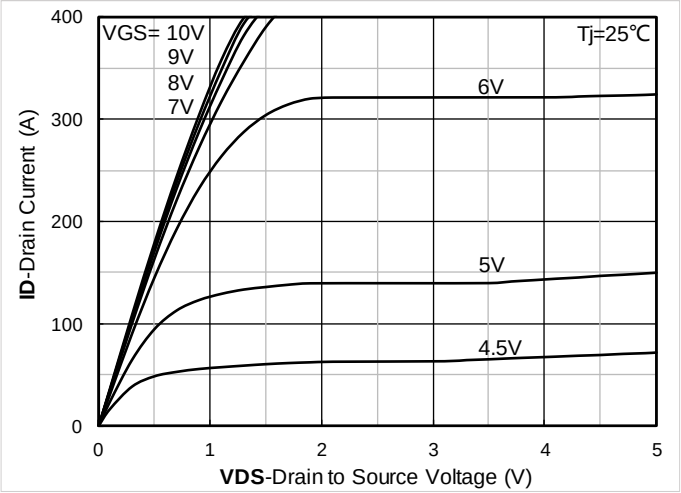

Figure 1. Output Characteristics

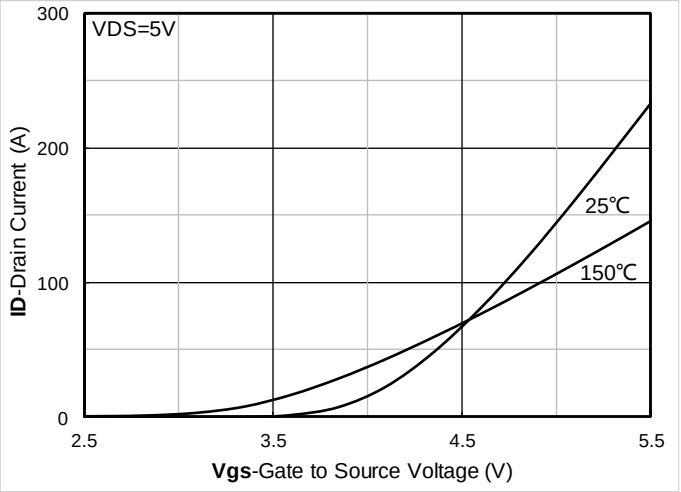

Figure 2. Transfer Characteristics

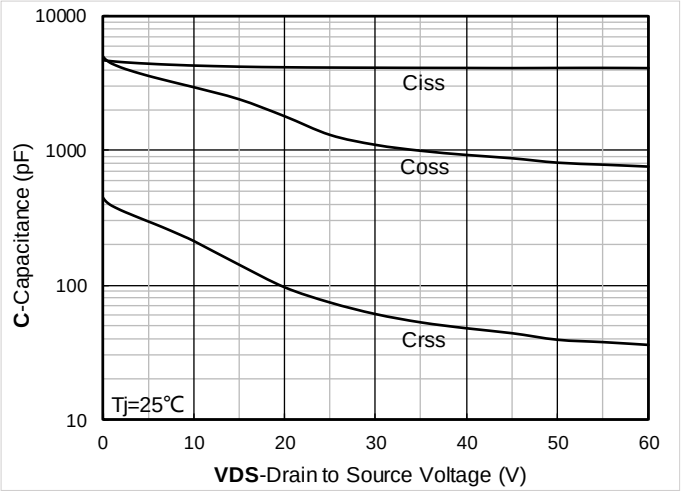

Figure 3. Capacitance Characteristics

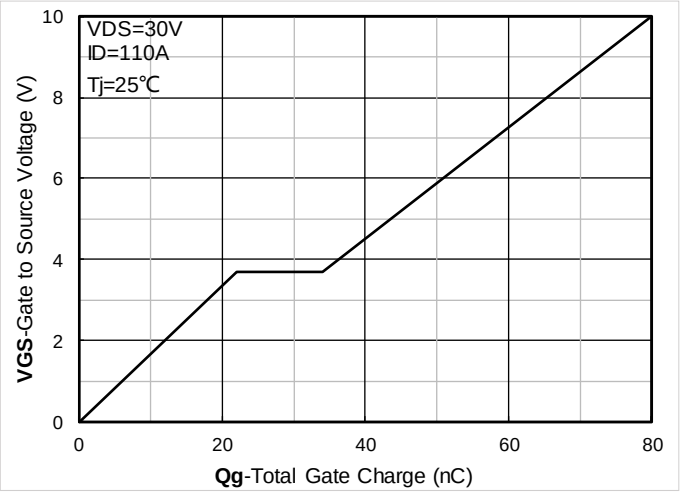

Figure 4. Gate Charge

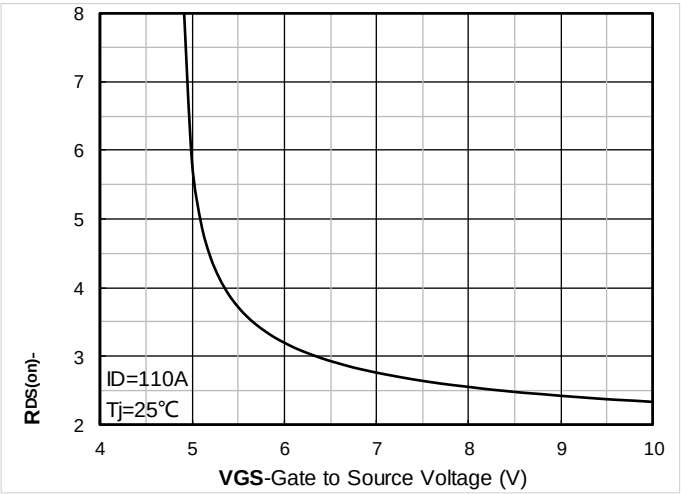

Figure 5. On-Resistance vs Gate to Source Voltage

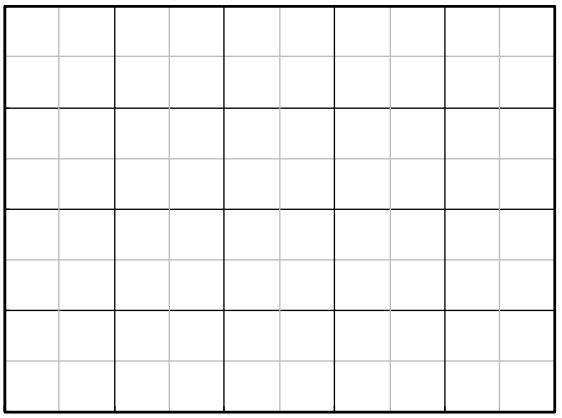

Figure 6. Normalized On-Resistance

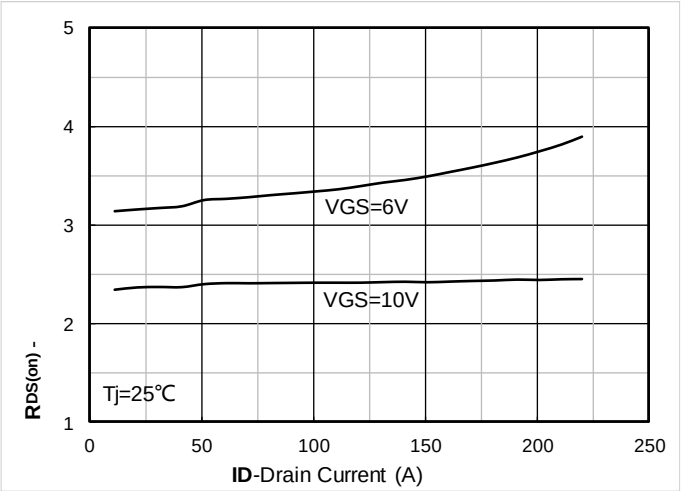

Figure 7. $R_{DS(on)}$ VS Drain Current

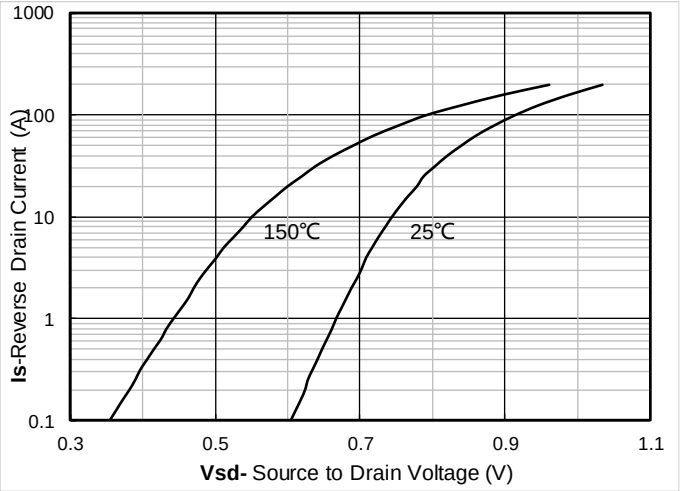

Figure 8. Forward characteristics of reverse diode

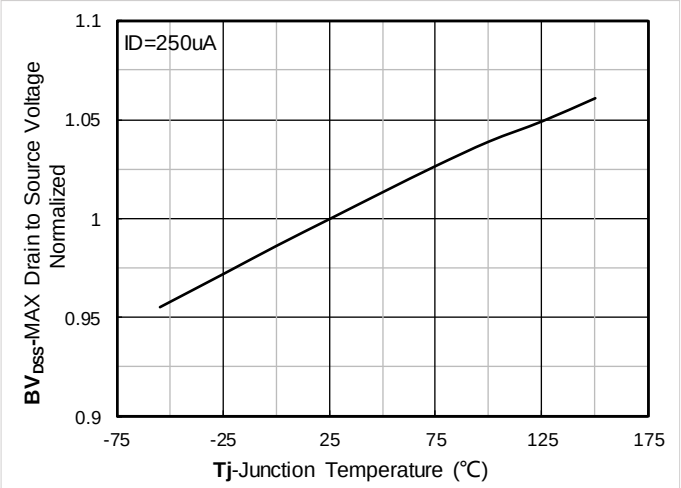

Figure 9. Normalized breakdown voltage

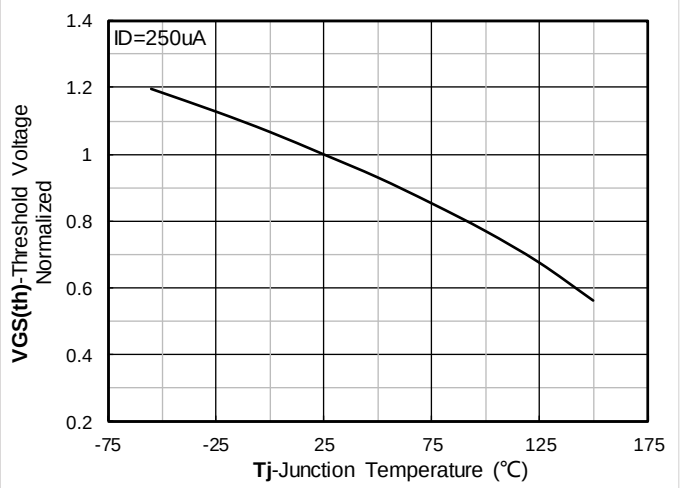

Figure 10. Normalized Threshold voltage

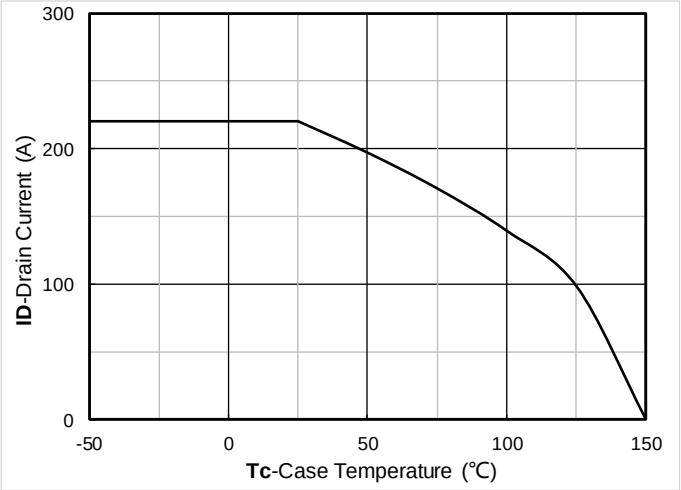

Figure 11. Current dissipation

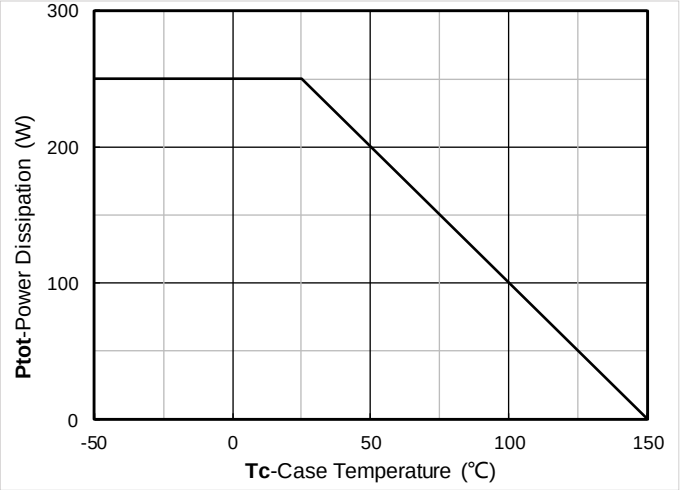

Figure 12. Power dissipation

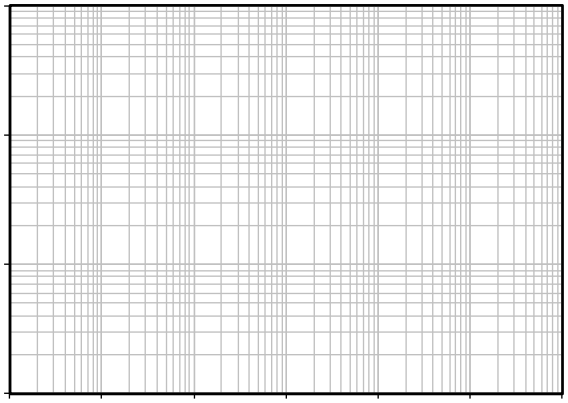

Figure 13. Maximum Transient Thermal Impedance

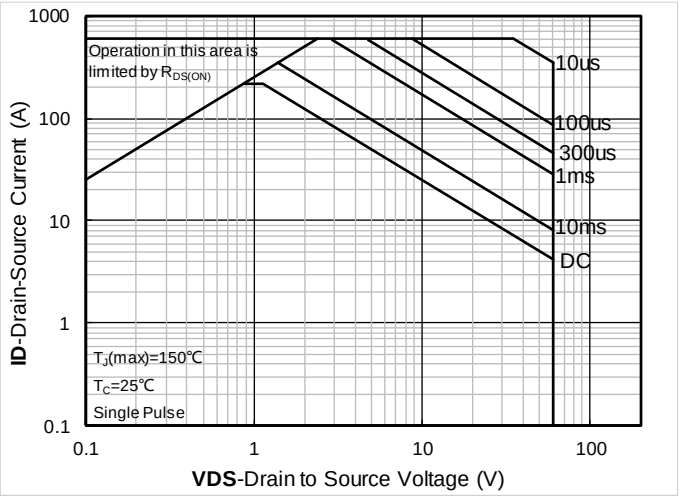

Figure 14. Safe Operation Area

Test Circuits & Waveforms

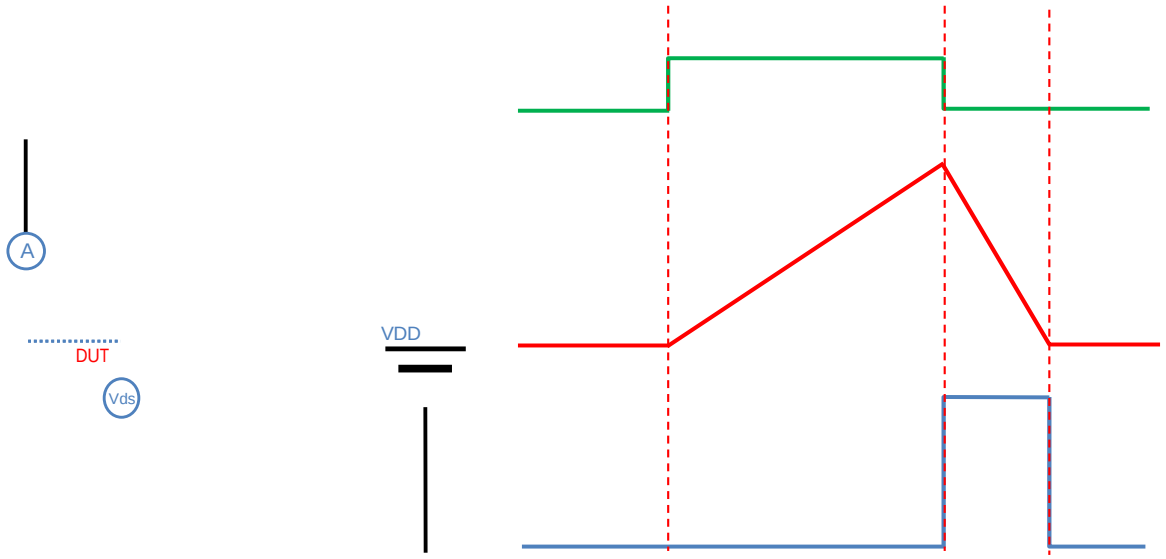

Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform

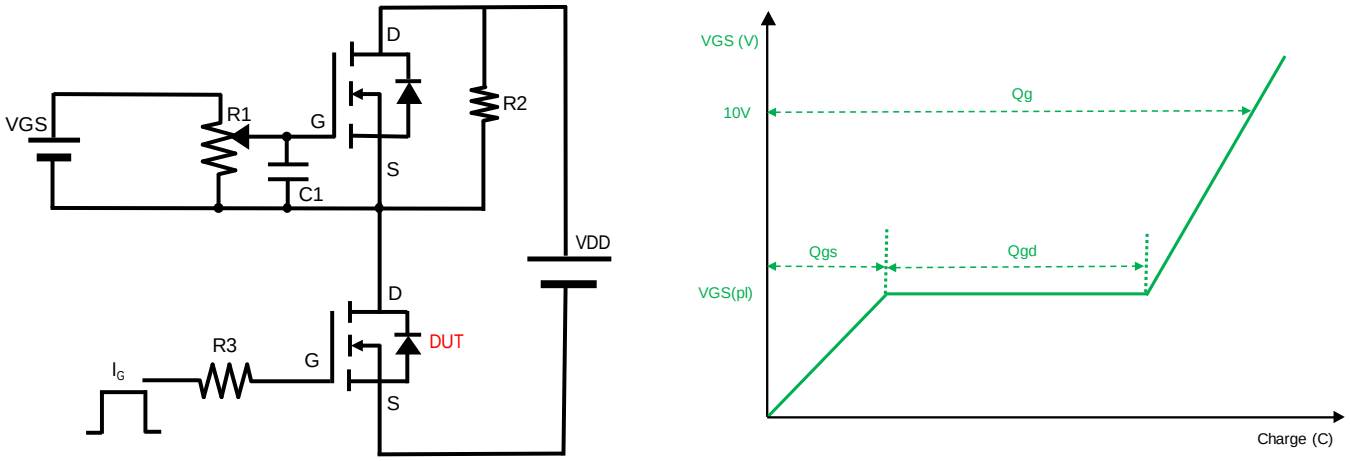

Figure B. Gate Charge Test Circuit & Waveform

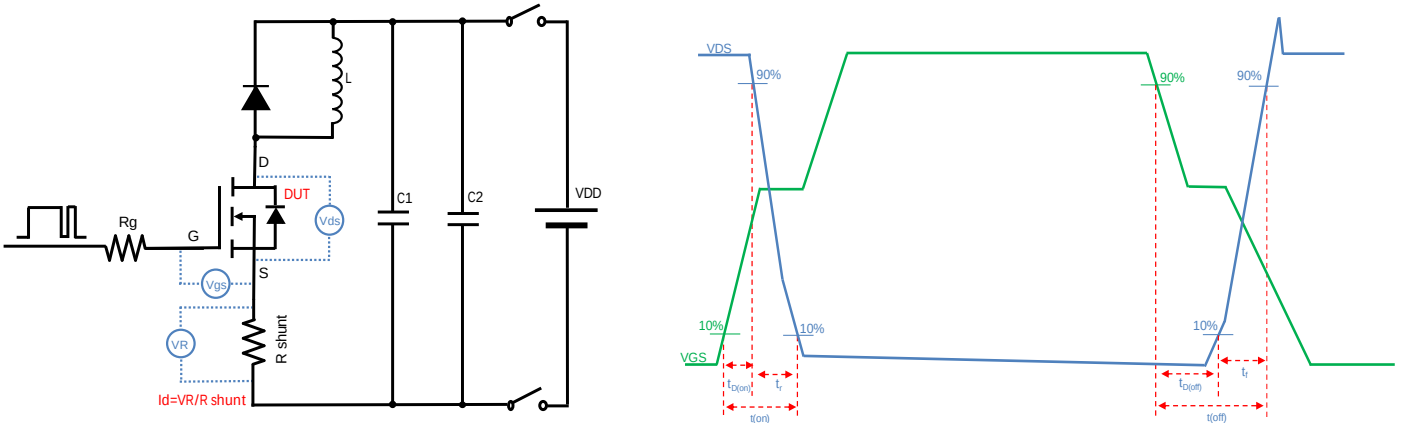

Figure C. Resistive Switching Test Circuit & Waveform

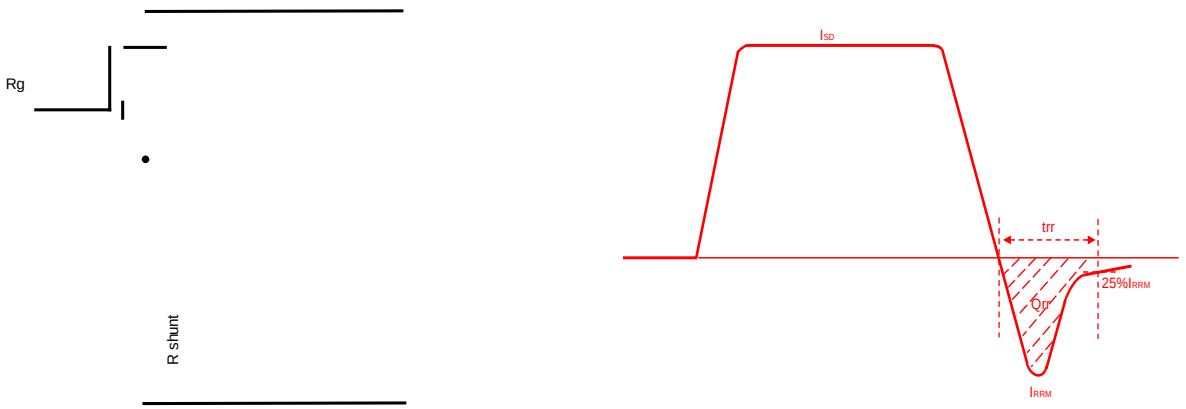

Figure D. Diode Recovery Test Circuit & Waveform

TOLL Package information

SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	2.2	2.3	2.4
A1	1.7	1.8	1.9
b	0.7	0.8	0.9
b1	9.7	9.8	9.9
b2	1.1	1.2	1.3
c	0.4	0.5	0.6
D			

Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.03mm.
3.The pad layout is for reference purposes only.

SUGGESTED SOLDER PAD LAYOUT
TOP VIEW

Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

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