N-Channel and N-Channel Complementary MOSFET

Product Summary

V_{DS}	60V
I_D	48A
$R_{DS(ON)}$(at V_{GS}=10V)	11m
$R_{DS(ON)}$(at V_{GS}=4.5V)	16m

100% EAS Tested
100% V_{DS} Tested

General Description

Excellent package for heat dissipation
High density cell design for low $R_{DS(ON)}$
Moisture Sensitivity Level 1
Epoxy Meets UL 94 V-0 Flammability Rating
Halogen Free

Applications

Engine management systems
Body control electronics
DC-DC convertor

Absolute Maximum Ratings (T_J=25 unless otherwise noted)

Parameter			Symbol	Limit	Unit
Drain-source Voltage			V_{DS}	60	V
Gate-source Voltage			V_{GS}	±20	V
Continuous Drain Current (Note 1,2)	Steady-State	T_A=25℃	I_D	10	A

Typical Electrical and Thermal Characteristics Diagrams

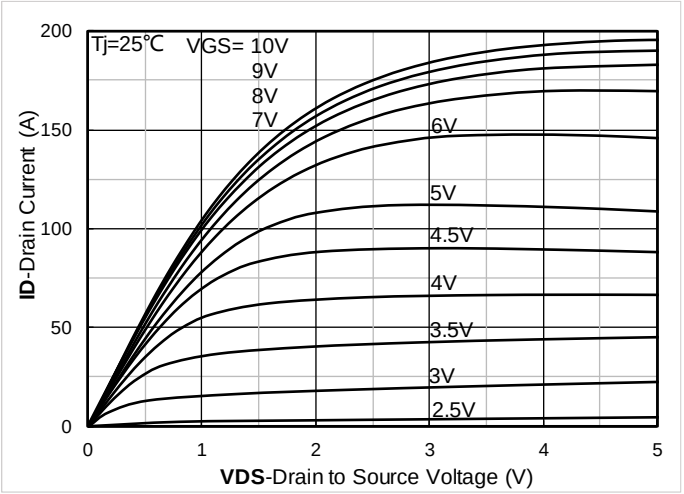


Figure 1. Output Characteristics

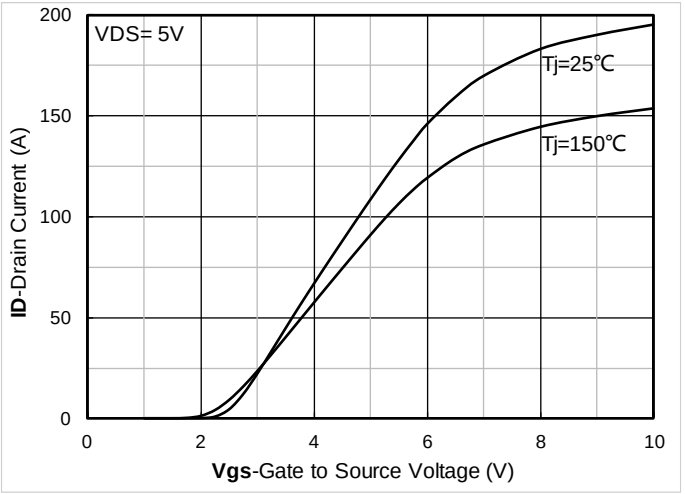


Figure 2. Transfer Characteristics

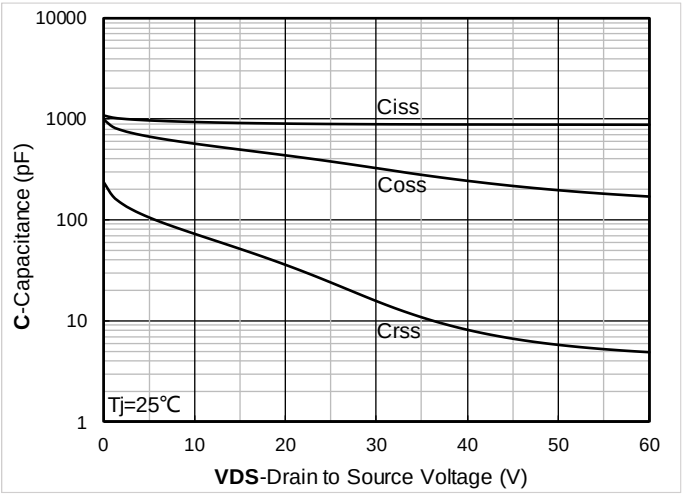


Figure 3. Capacitance Characteristics

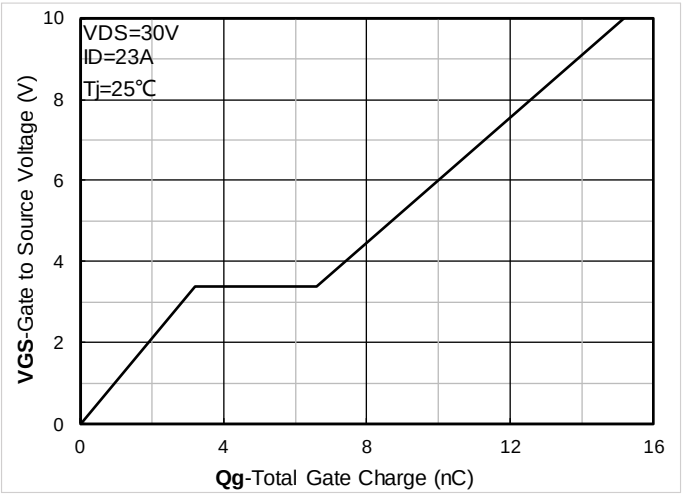


Figure 4. Gate Charge

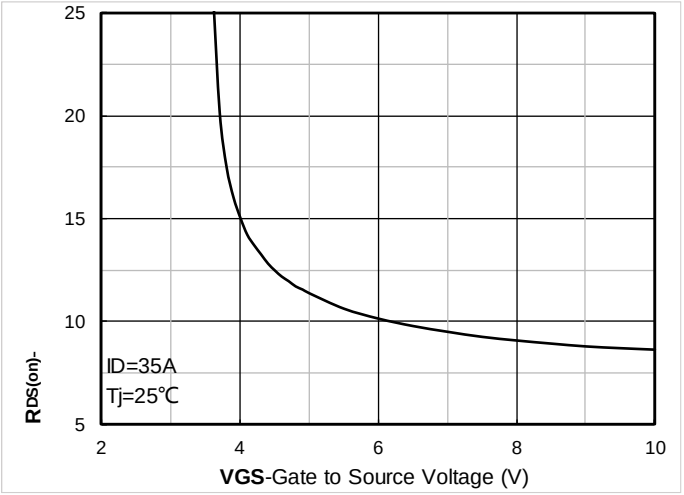


Figure 5. On-Resistance vs Gate to Source Voltage

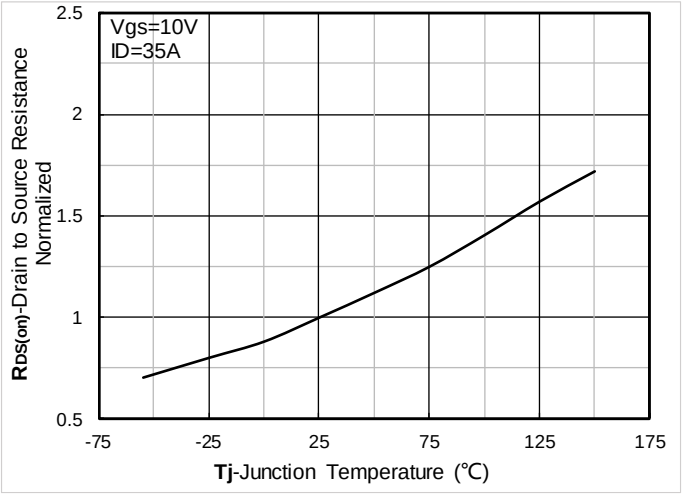


Figure 6. Normalized On-Resistance

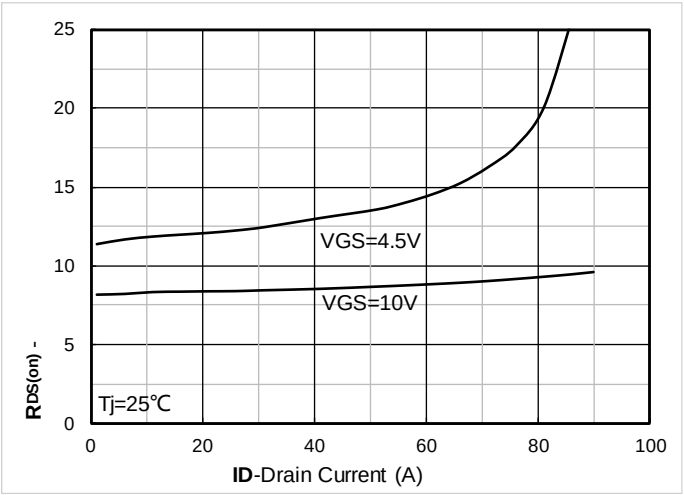


Figure 7. $R_{DS(on)}$ VS Drain Current

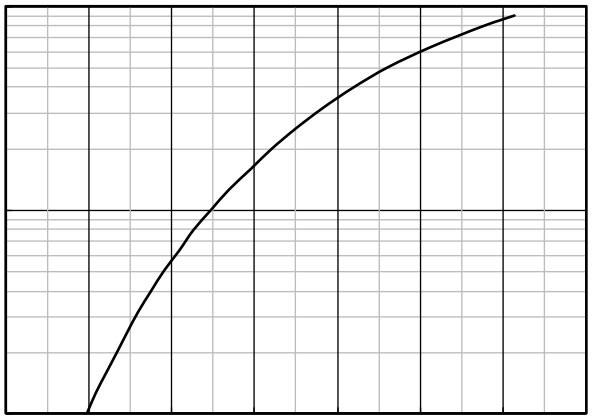


Figure 8. Forward characteristics of reverse diode

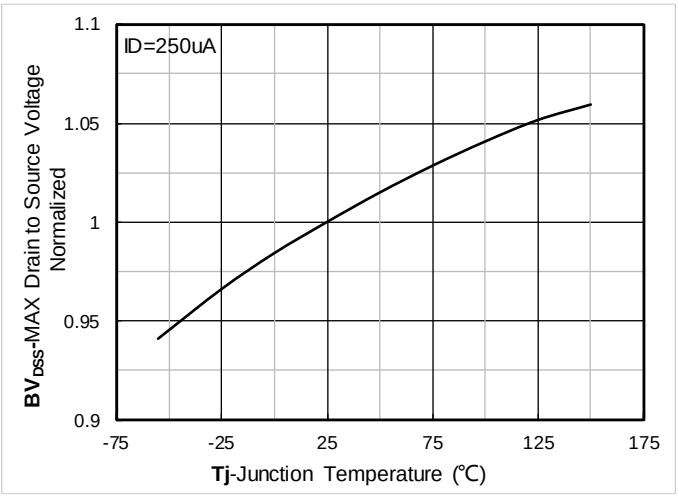


Figure 9. Normalized breakdown voltage

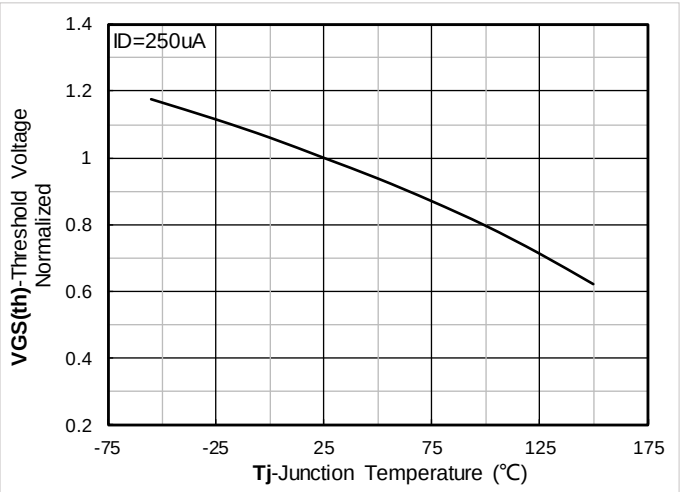


Figure 10. Normalized Threshold voltage

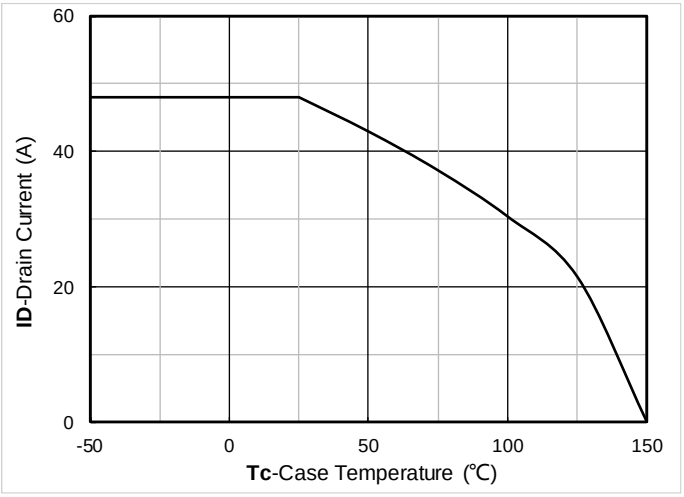


Figure 11. Current dissipation

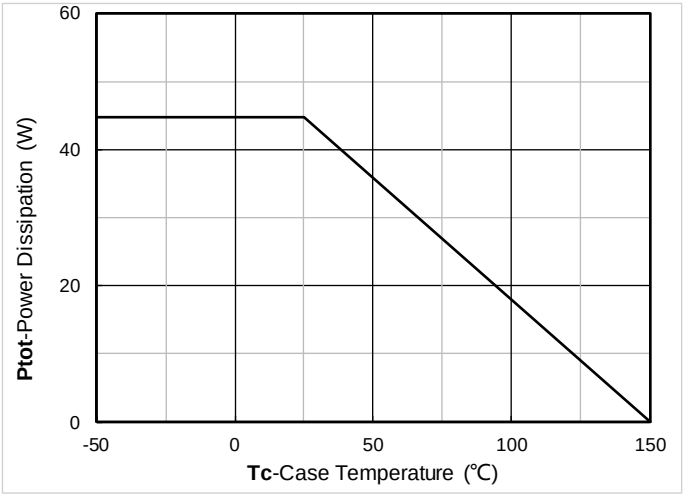


Figure 12. Power dissipation

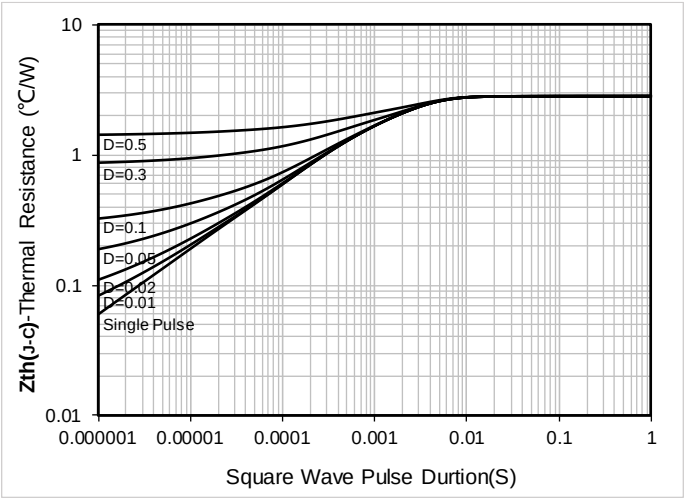


Figure 13. Maximum Transient Thermal Impedance

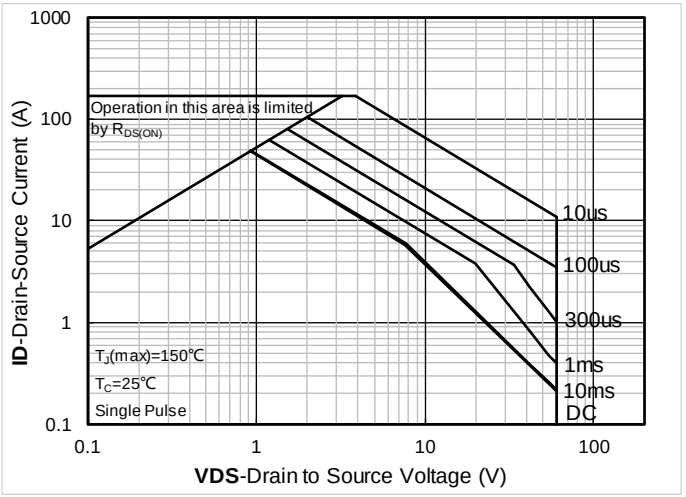


Figure 14. Safe Operation Area

Test Circuits & Waveforms

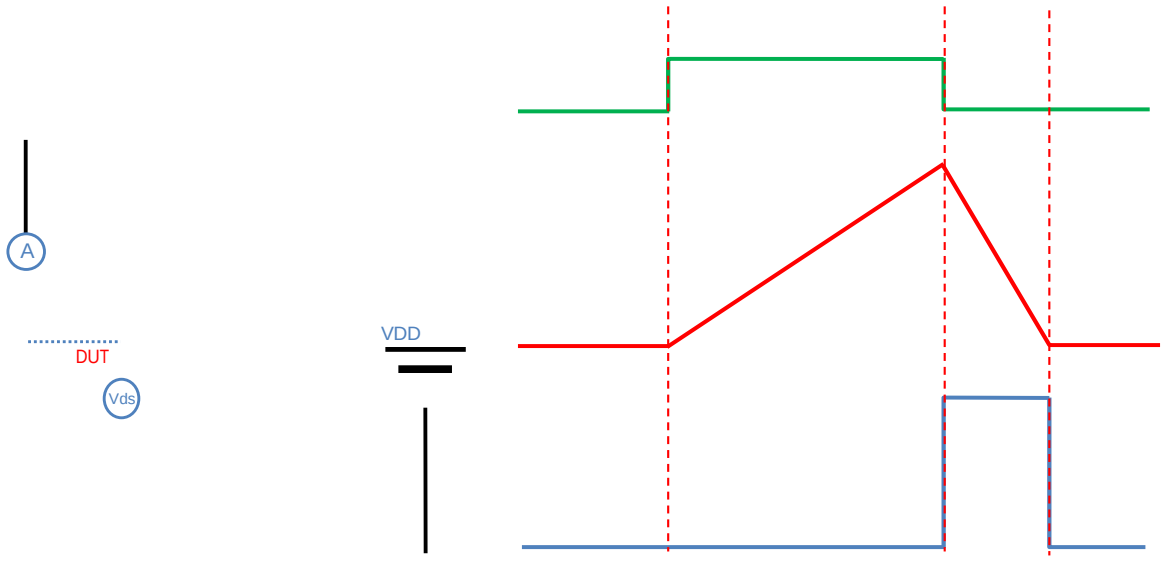


Figure A. Unclamped Inductive Switching (UIS) Test Circuit & Waveform

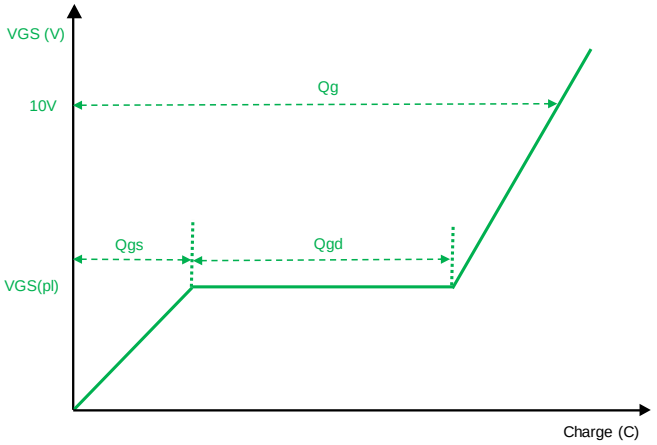


Figure B. Gate Charge Test Circuit & Waveform

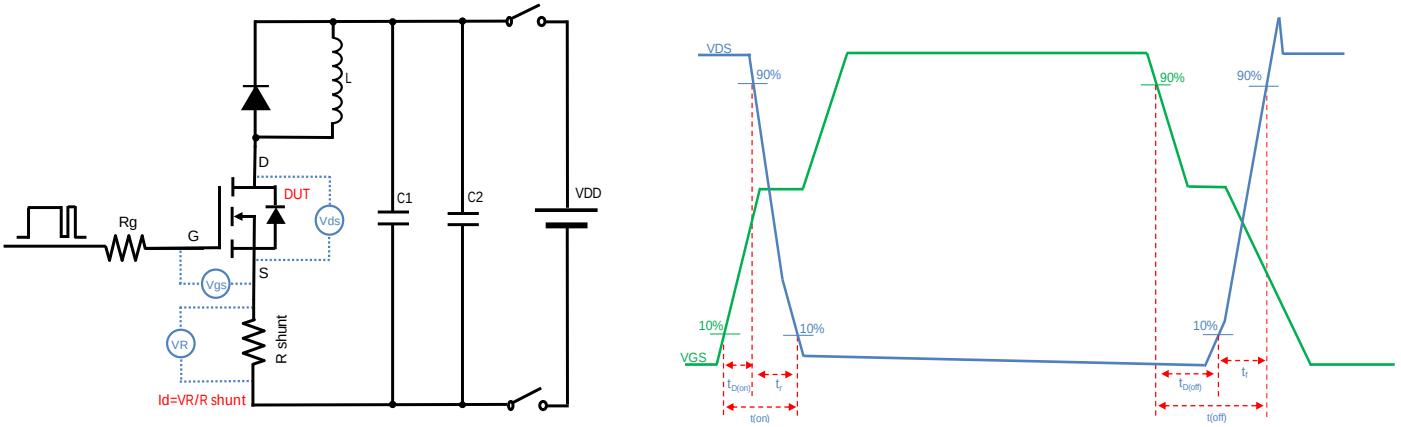


Figure C. Resistive Switching Test Circuit & Waveform

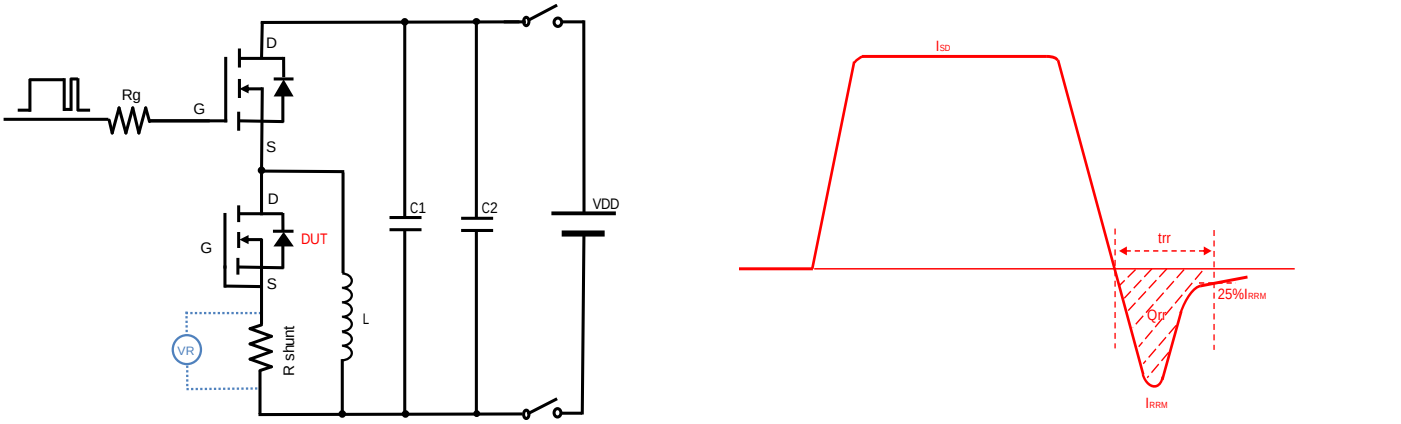
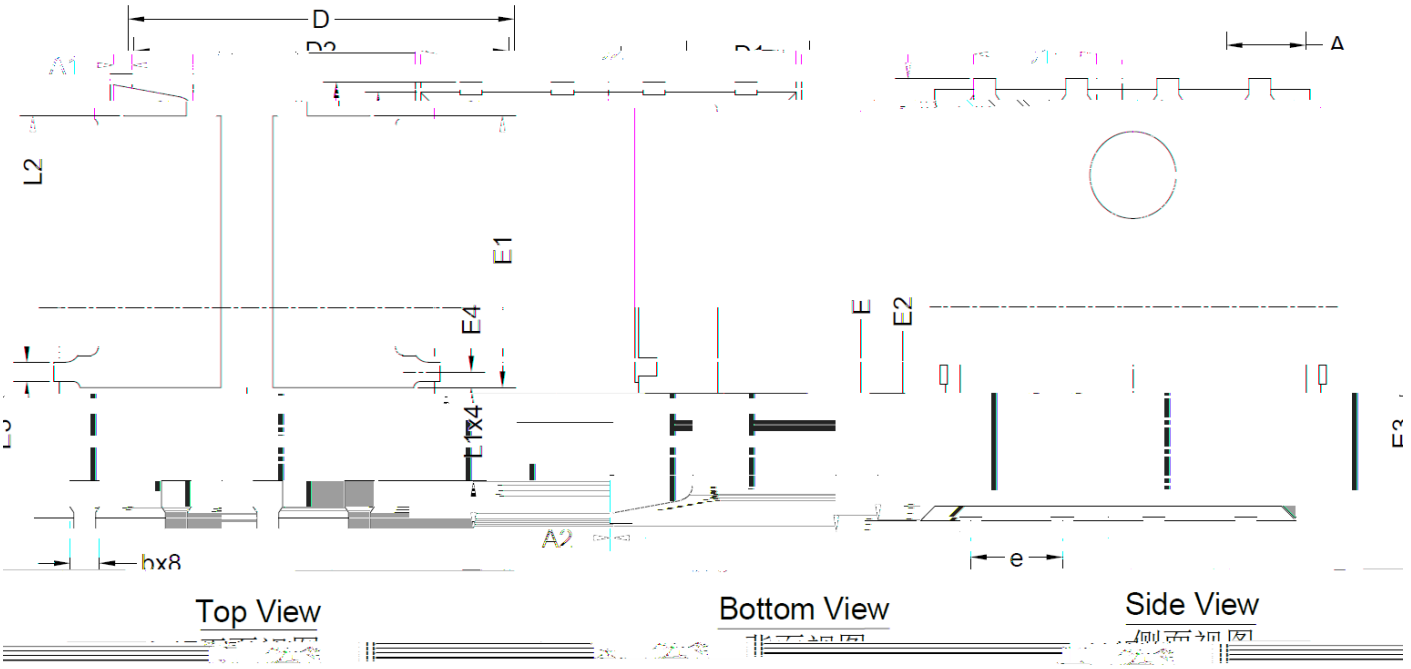
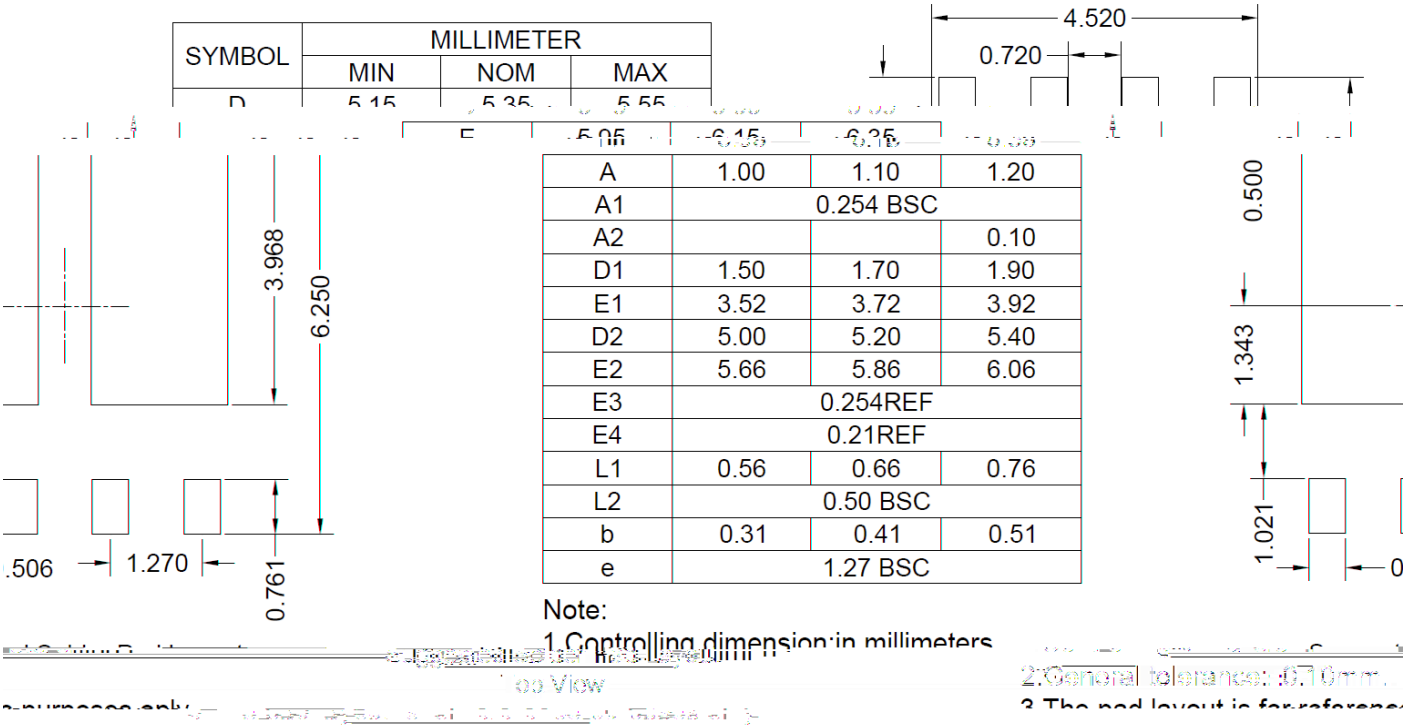


Figure D. Diode Recovery Test Circuit &

PDFN5060-8L-E-1.1mm Package information



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
D	5.15	5.35	5.55
E	6.05	6.15	6.25



A	1.00	1.10	1.20
A1		0.254 BSC	
A2			0.10
D1	1.50	1.70	1.90
E1	3.52	3.72	3.92
D2	5.00	5.20	5.40
E2	5.66	5.86	6.06
E3		0.254REF	
E4		0.21REF	
L1	0.56	0.66	0.76
L2		0.50 BSC	
b	0.31	0.41	0.51
e		1.27 BSC	

Note:

1.Controlling dimension:in millimeters

2.General tolerance:±0.10mm.

3.The pad layout is for reference

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not 2/F5 -108(e)- do oand th /F5 9 Te