N-Channel Enhancement Mode Field Effect Transistor

Product Summary

- V_{DS} 100V
- I_D 74A
- $R_{DS(ON)}$(at V_{GS}=10V) 6.5mΩ
- $R_{DS(ON)}$(at V_{GS}=4.5V) 8.5mΩ
- 100% EAS Tested
- 100% V_{DS} Tested

General Description

- Split gate trench MOSFET technology
- Excellent package for heat dissipation
- High density cell design for low $R_{DS(ON)}$
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-

■ Electrical Characteristics (T_J=25 unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}= 0V, I_D=250μA	100	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=100V, V_{GS}=0V	-	-	1	μA
		V_{DS}=100V, V_{GS}=0V, Tj=150	-	-	100	
Gate-Body Leakage Current	I_{GSS}	V_{GS}= ±20V, V_{DS}=0V	-	-	±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS}, I_D=250μA	1.1	1.7	2.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V, I_D=37A	-	5	6.5	mΩ

Typical Electrical and Thermal Characteristics Diagrams

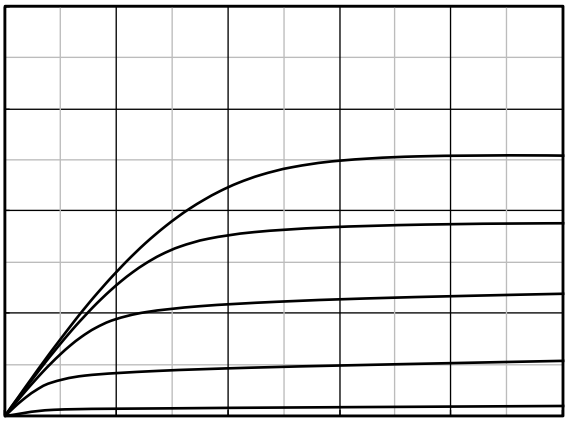


Figure 1. Output Characteristics

Figure 2. Transfer Characteristics

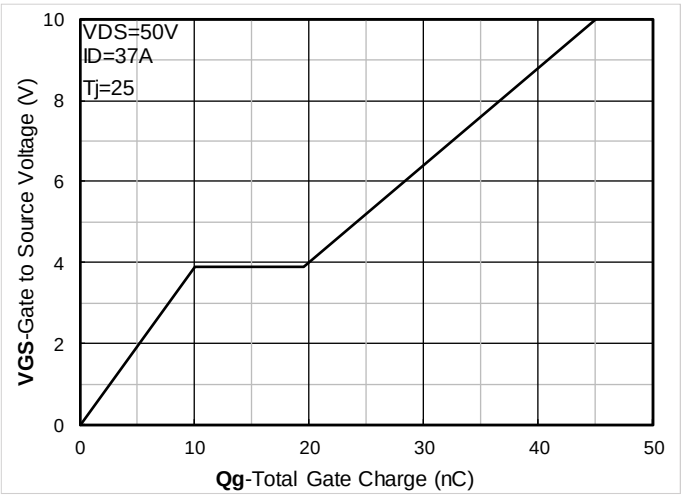
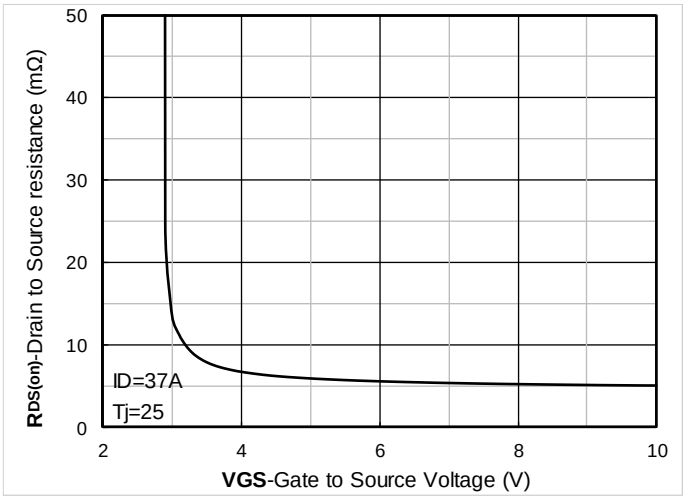


Figure 3. Capacitance Characteristics

Figure 4. Gate Charge



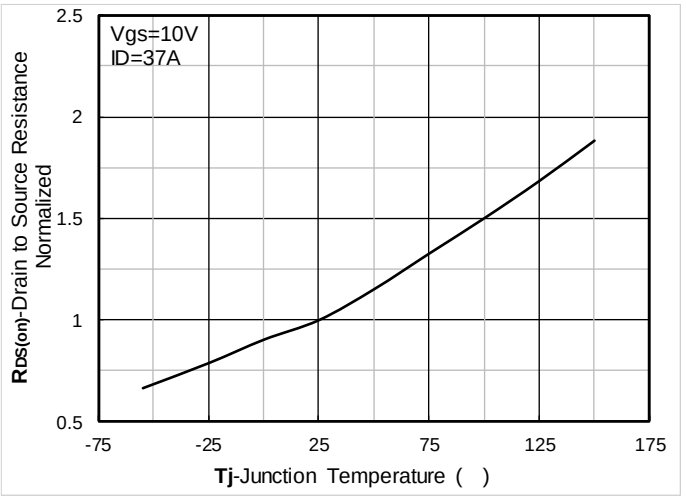
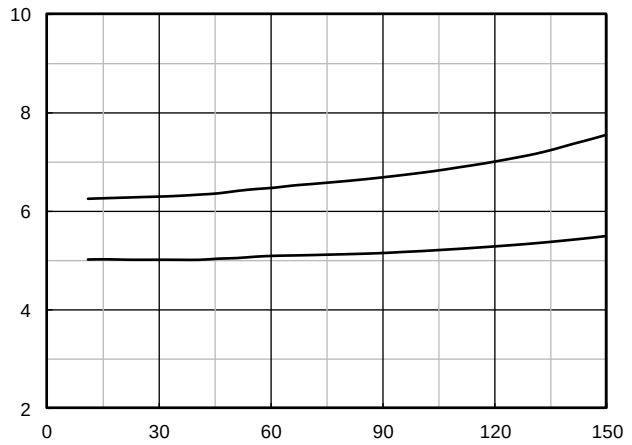


Figure 5. On-Resistance vs Gate to Source Voltage

Figure 6. Normalized On-Resistance



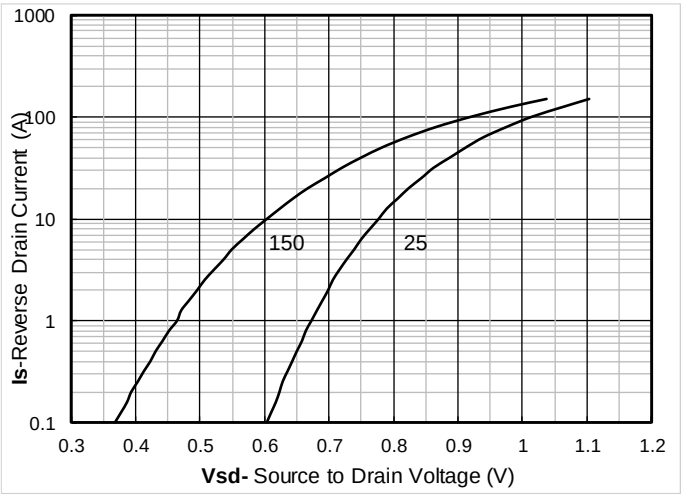


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Figure 7. RDS(

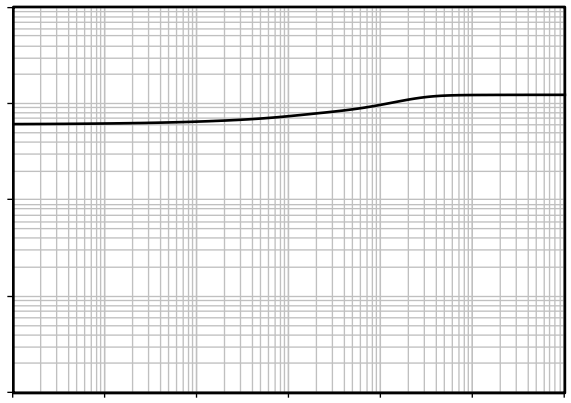


Figure 13. Maximum Transient Thermal Impedance

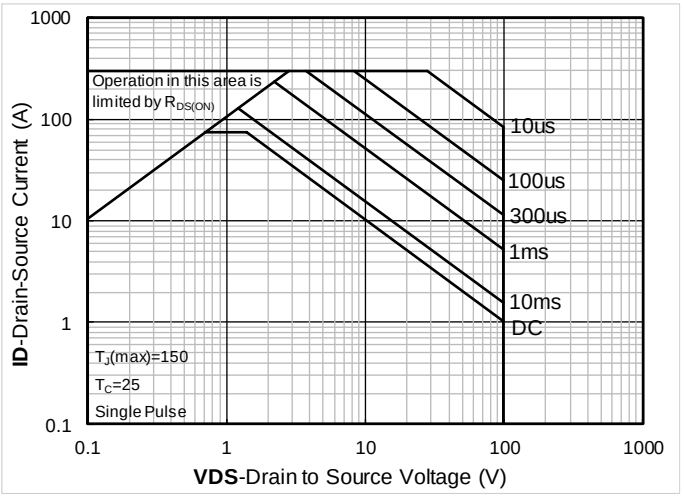


Figure 14

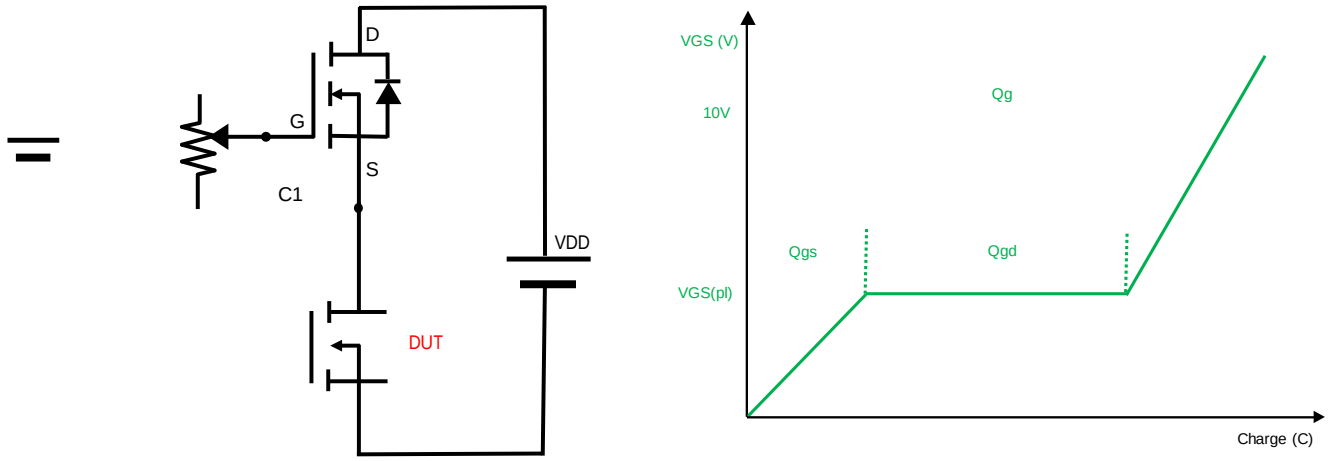


Figure B. Gate Charge Test Circuit & Waveform

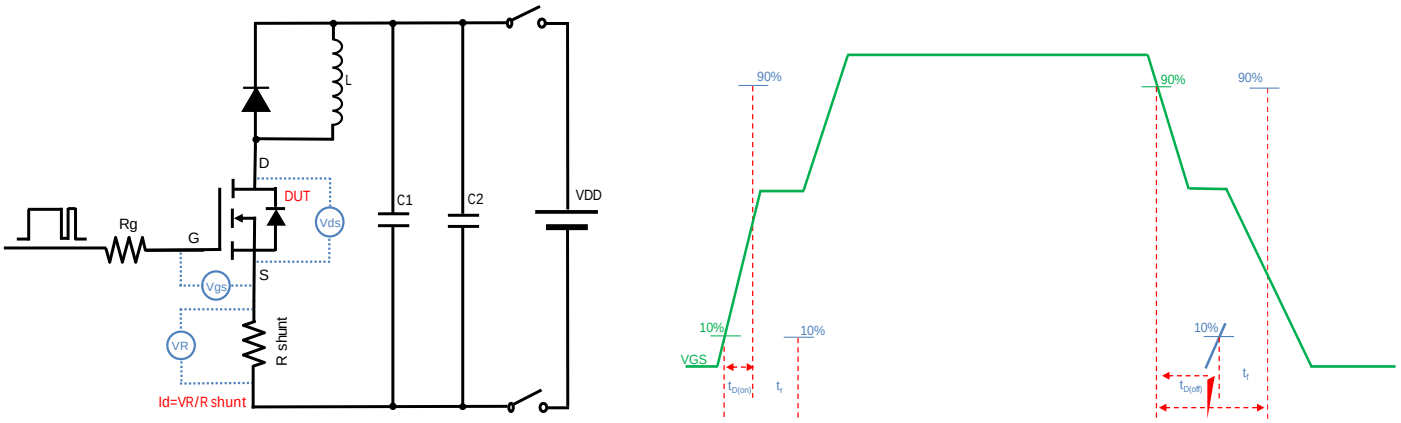
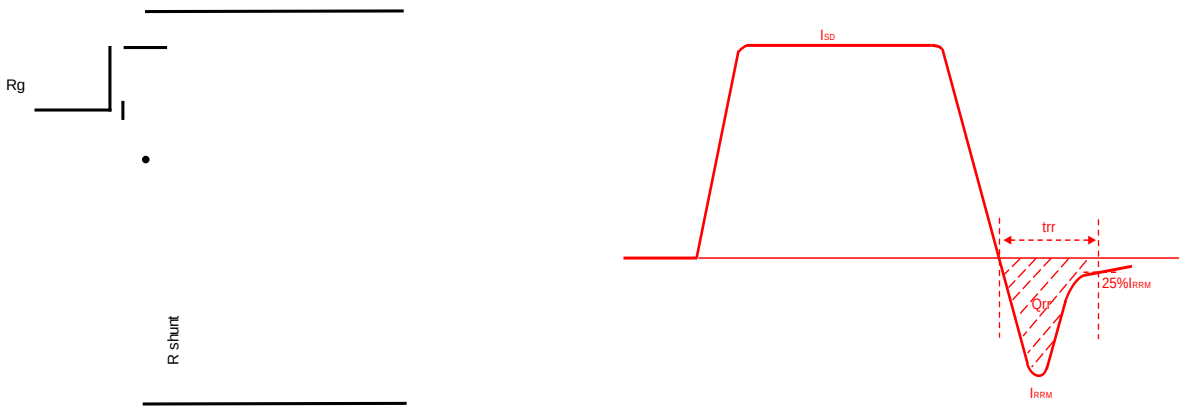
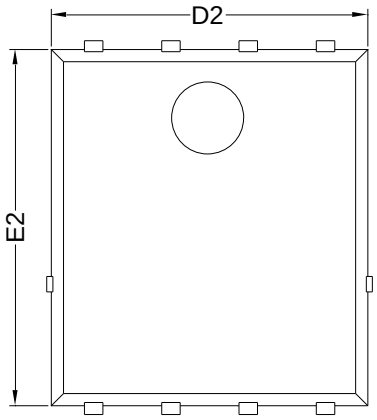


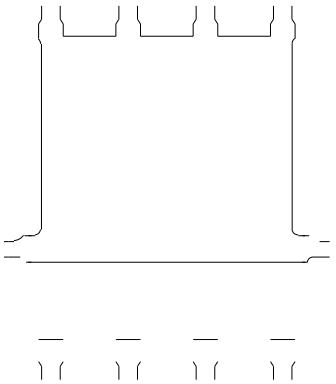
Figure C. Resistive Switching Test Circuit & Waveform



■ PDFN5060-8L-B-1.1MM Package information



Top View



Bottom View

Side View

SYMBOL	MILLIMETER		
	MIN	NOM	MAX
D	5.15	5.35	5.55
E	5.95	6.15	6.35
A	1.00	1.10	1.20
A1		0.254 BSC	
A2			0.10
D1	3.92	4.12	4.32
E1	3.52	3.72	3.92
D2	5.00	5.20	5.40
E2	5.66	5.86	6.06
E3		0.254 REF	
E4		0.21 REF	
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 purposes only.

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