N-Channel Enhancement Mode Field Effect Transistor

Product Summary

- V_{DS} 30V
- I_D 50A
- $R_{DS(ON)}$(at V_{GS}= 10V) 4.7mohm
- $R_{DS(ON)}$(at V_{GS}=4.5V) 6.0mohm
- EAS Tested
- V_{DS} Tested

General Description

- 7UHQFK 3RZHU /9 026)(7 WHFKQRORJ
- 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

- High current load applications
- Load switching
- Hard switched and high frequency circuits
- Uninterruptible power supply

Absolute Maximum Ratings (T_A=25 unless otherwise noted)

Parameter		Symbol	Limit	Unit
Drain-source Voltage		V_{DS}	30	V
Gate-source Voltage		V_{GS}	± 20	V
Drain Current	T_C=25	I_D	50	A
	T_C=100		31.6	
Pulsed Drain Current [A]		I_{DM}	190	A
Total Power Dissipation	T_C=25	P_D	45	W
	T_C=100		17.8	W
Single Pulse Avalanche Energy [B]		E_{AS}	196	mJ
Thermal Resistance Junction-to-Case [C]		R_{JC}	2.8	/W
Junction and Storage Temperature Range		T_J ,T_{STG}	-55 +150	

Ordering Information (Example)

PREFERED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	

Typical Performance Characteristics

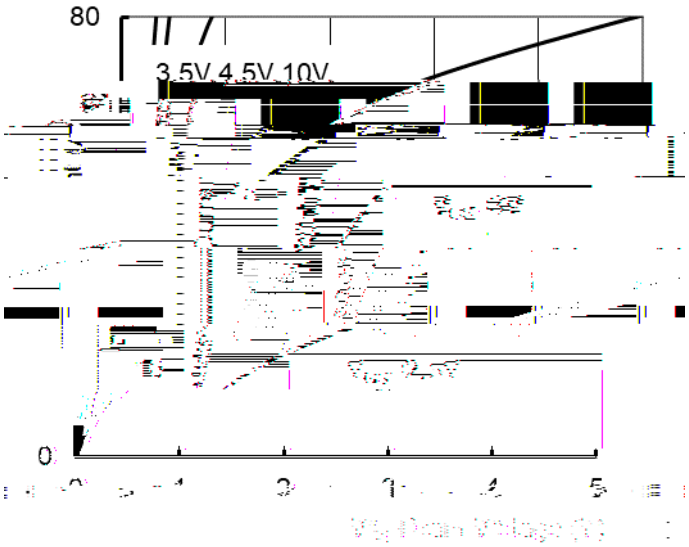


Figure 1. Output Characteristics

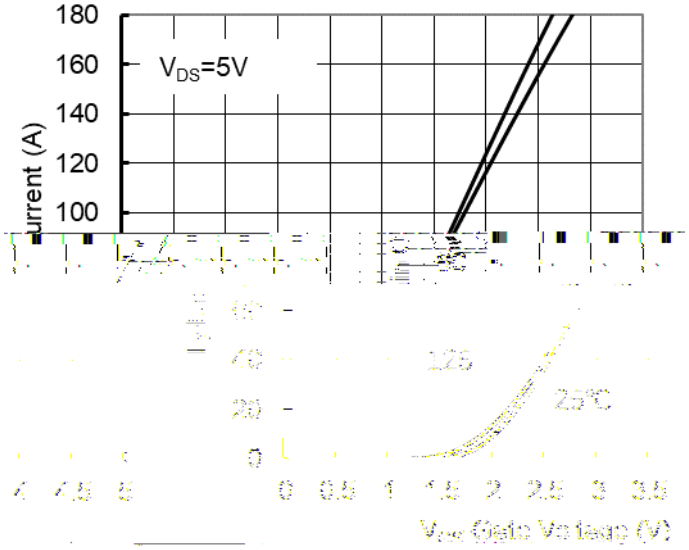


Figure 2. Transfer Characteristics

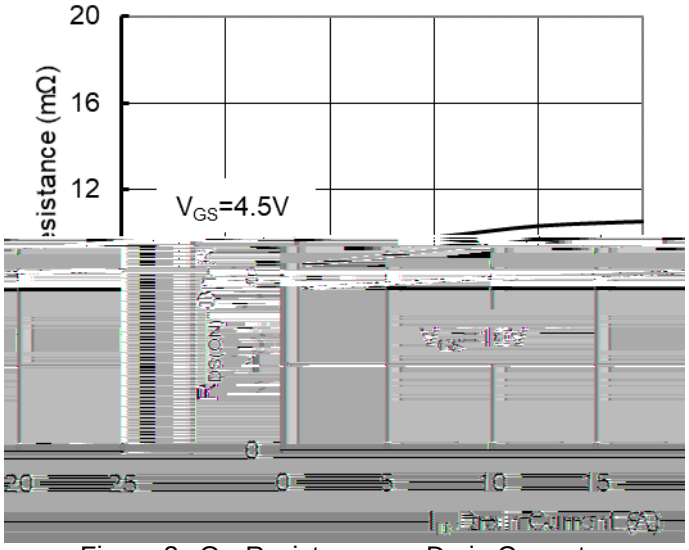


Figure 3 . On-Resistance vs. Drain Current and Gate Voltage

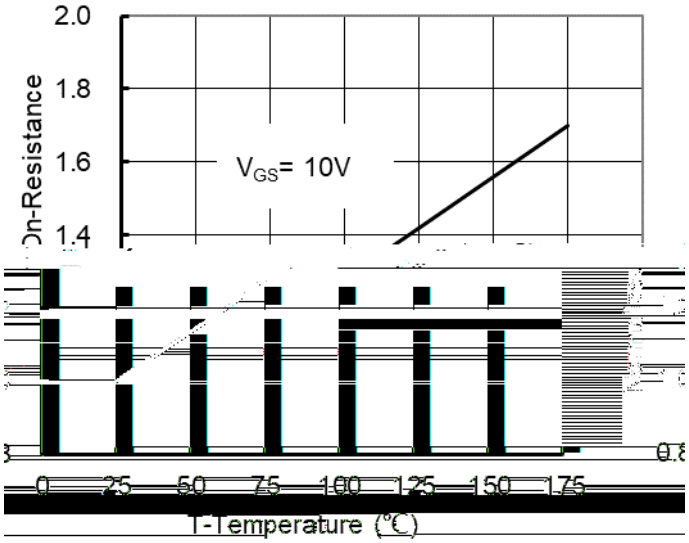


Figure 4. On-Resistance vs. Junction Temperature

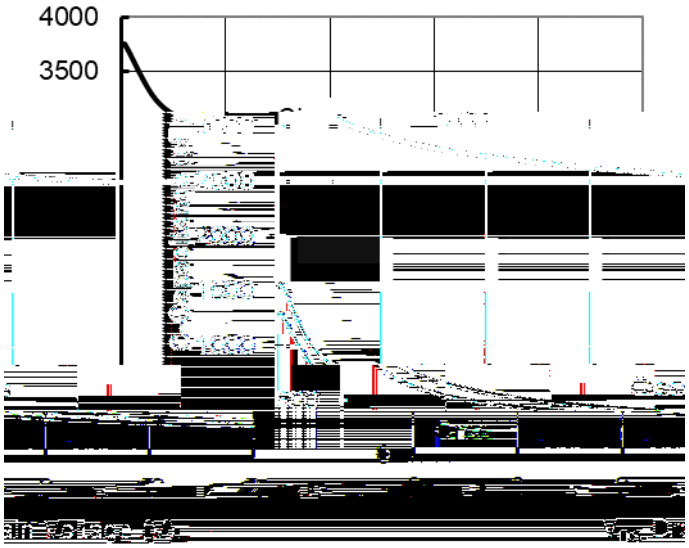


Figure 5. Capacitance Characteristics

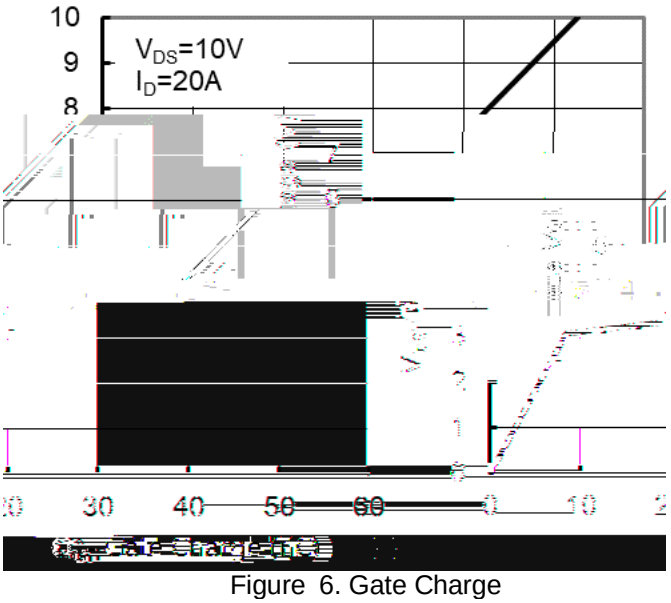
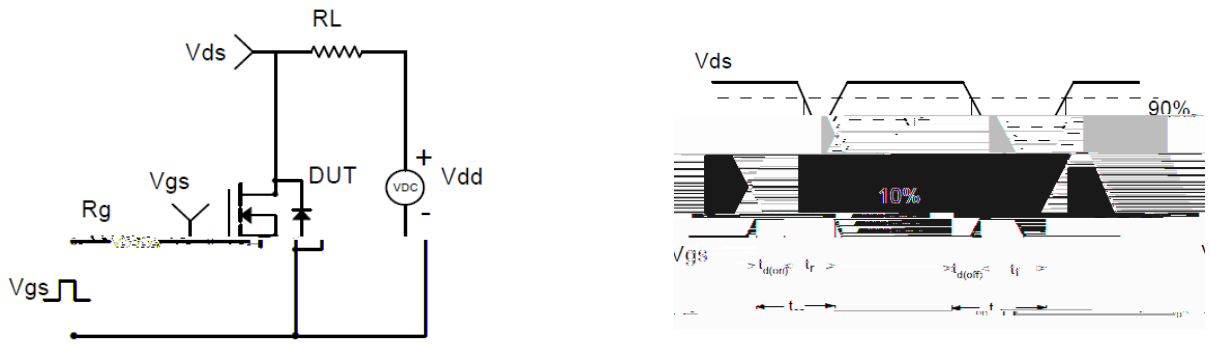
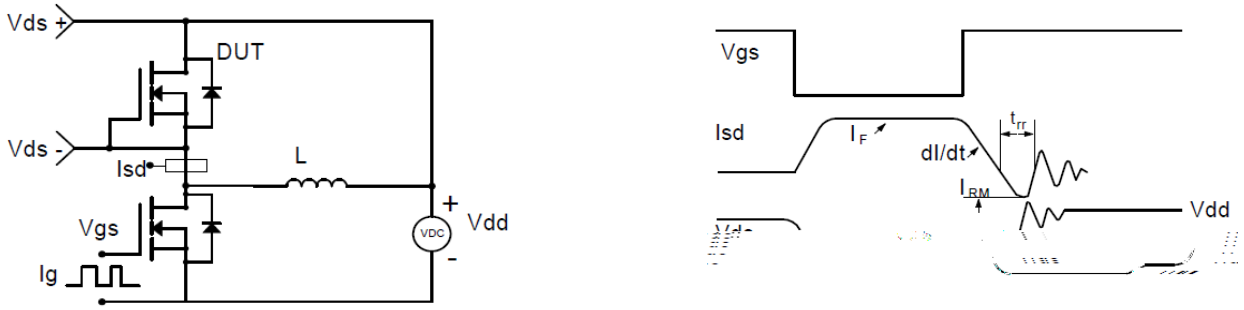


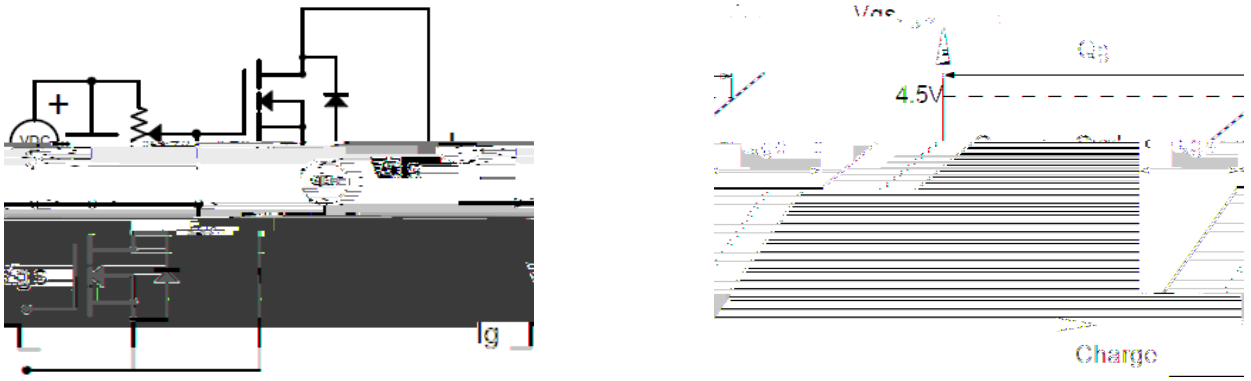
Figure 6. Gate Charge



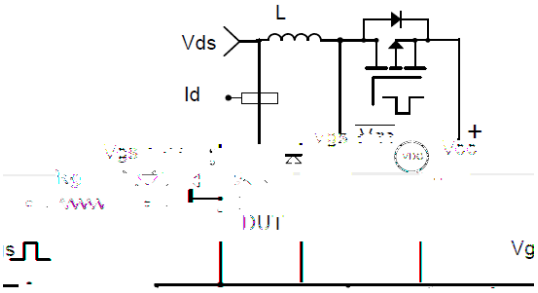
Resistive Switching Test Circuit & Waveforms



Diode Recovery Test Circuit & Waveforms

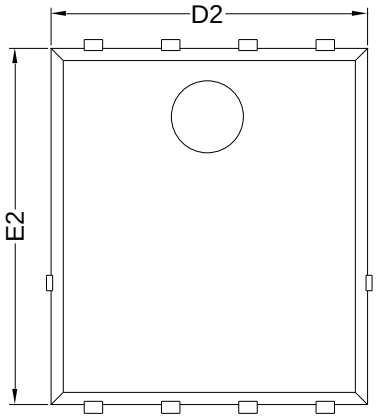


Gate Charge Test Circuit & Waveform

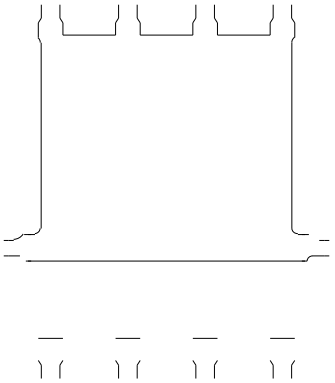


Unclamped Inductive Switching (UIS) Test Circuit & Waveforms

vPDFN5060-8L-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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