

**Product Summary**

The ZMD68311S combines advanced trench MOSFET technology with a low resistance package to provide extremely low  $R_{DS(ON)}$ . This device is ideal for load switch and battery protection applications.

Advance high cell density Trench technology

$R_{DS(ON)}$  to minimize conductive loss

fast switching

Dual DIE in one package

Power Management in Notebook Computer,  
 Portable Equipment and Battery Powered

ms

$T_C = 25$  Q1

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_{D@TC=25}$	11	A
	$I_{D@TC=75}$	8.4	A
	$I_{D@TC=100}$	6.9	A
Pulsed Drain Current	$I_{DM}$	25	A
Total Power Dissipation	$P_D@TC=25$	30	W
Total Power Dissipation	$P_D@TA=25$	1.2	W
Operating Junction Temperature	$T_J$	-55 to 150	
Storage Temperature	$T_{STG}$	-55 to 150	
Single Pulse Avalanche Energy	$E_{AS}$	60	mJ



**T<sub>C</sub> =25**      **Q2**

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V <sub>DS</sub>	30	V
Gate-Source Voltage	V <sub>GS</sub>	20	V
Continuous Drain Current	I <sub>D@TC=25</sub>	14	A
	I <sub>D@TC=75</sub>	10.6	A
	I <sub>D@TC=100</sub>	8.8	A
Pulsed Drain Current	I <sub>DM</sub>	30	A
Total Power Dissipation	P <sub>D@TC=25</sub>	30	W
Total Power Dissipation	P <sub>D@TA=25</sub>	1.2	87.38 Tm



(Q2)

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	$C_{iss}$	f = 1MHz	-	1150	-	pF
Output capacitance	$C_{oss}$		-	230	-	
Reverse transfer capacitance	$C_{rss}$		-	113	-	

Gate Charge characteristics( $T_a = 25$  )(Q2)

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Total gate charge	$Q_g$	$V_{DD} = 25V$	-	16	-	nC
Gate - Source charge	Q	$I_D = 5A$				
		$V_{GS} = 10V$				



**Channel characteristics curve(Q2)**

Fig.7 Power Dissipation

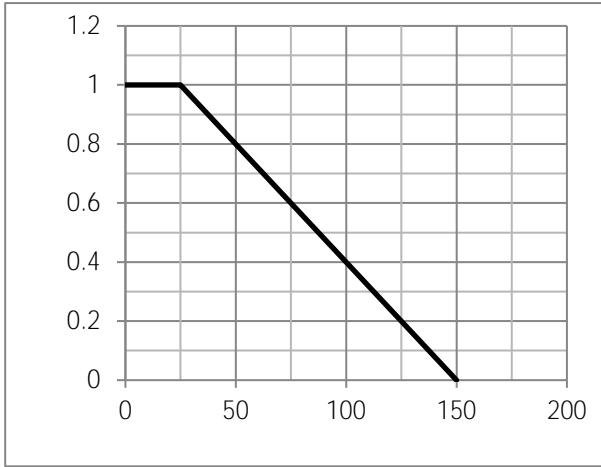


Fig.8 Typical output Characteristics

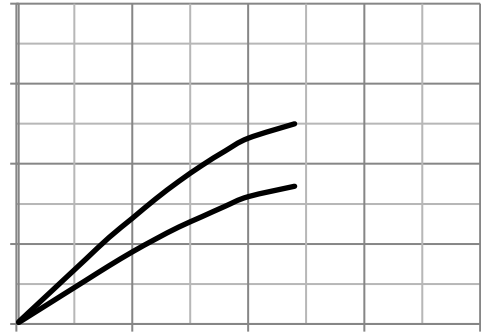


Fig.9 Threshold Voltage V.S Junction Temperature

Fig.10 Resistance V.S Drain Current

Fig.11 On-Resistance VS Gate Source Voltage

Fig.12 On-Resistance V.S Junction Temperature

Fig.13 Switching Time Measurement Circuit

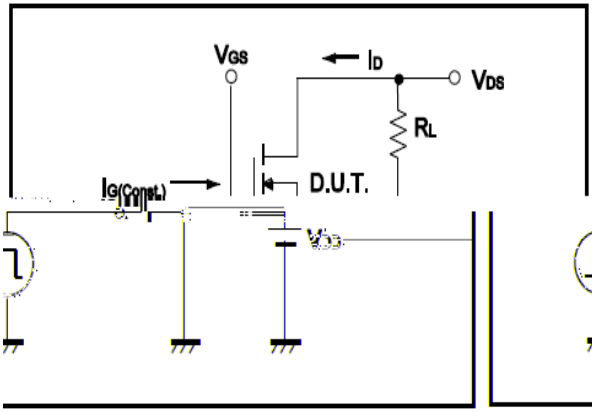


Fig.14 Gate Charge Waveform

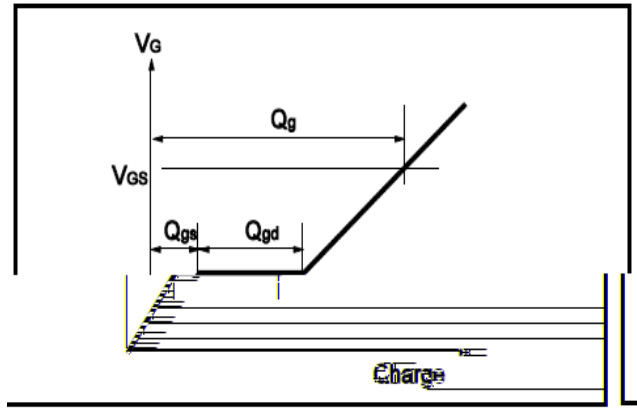


Fig.15 Switching Time Measurement Circuit

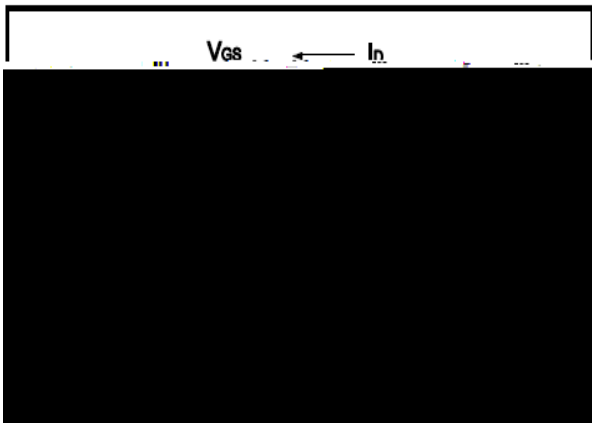


Fig.16 Gate Charge Waveform

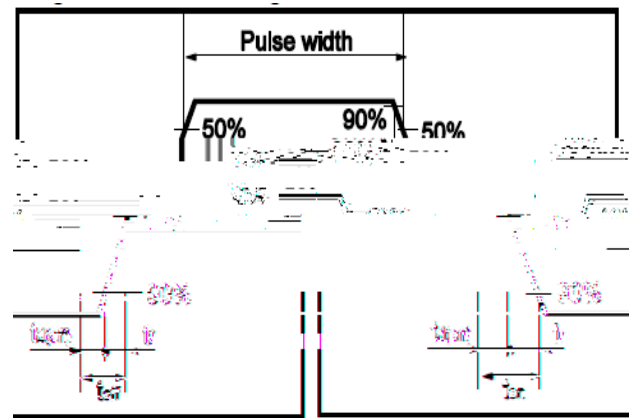


Fig.17 Avalanche Measurement Circuit

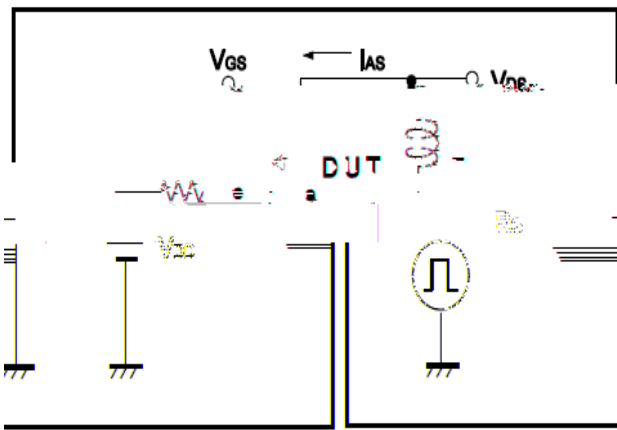


Fig.18 Avalanche Waveform

