

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}	± 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_C =25 Q2**

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

**(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

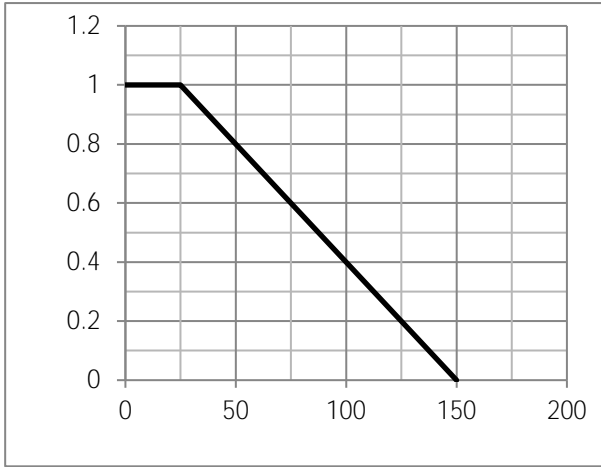


Fig.8 Typical output Characteristics

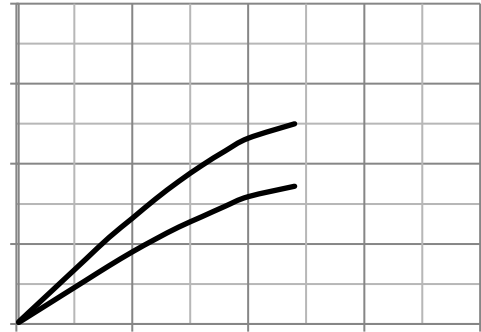


Fig.9 Threshold Voltage V.S Junction Temperature

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

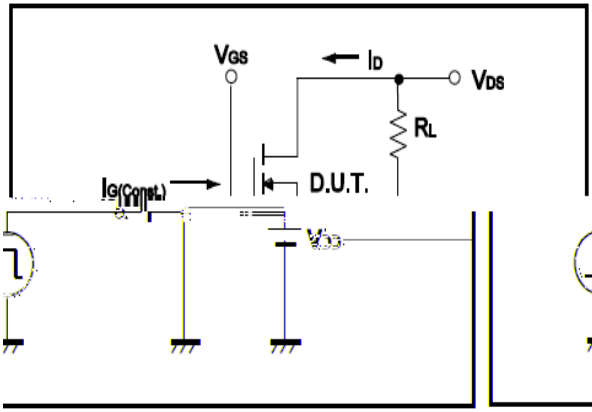


Fig.14 Gate Charge Waveform

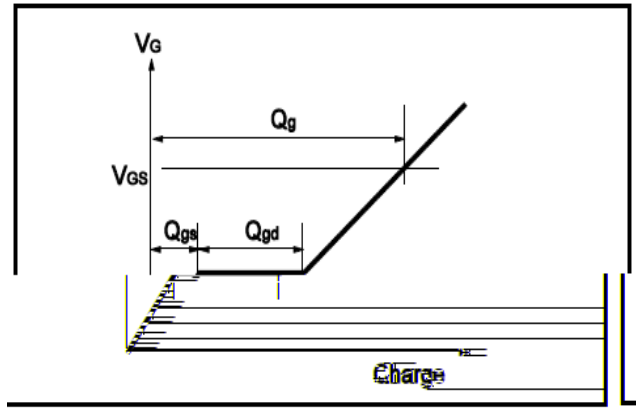


Fig.15 Switching Time Measurement Circuit

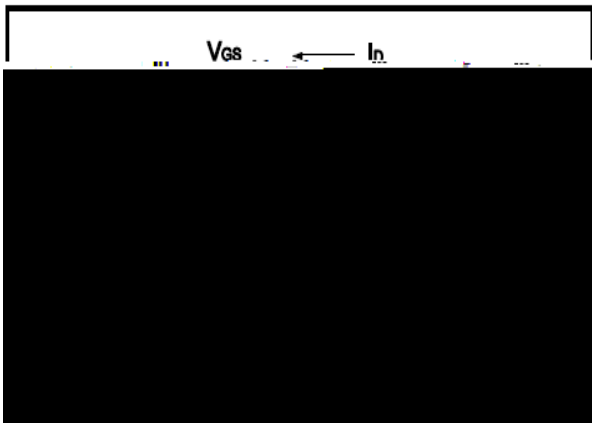


Fig.16 Gate Charge Waveform

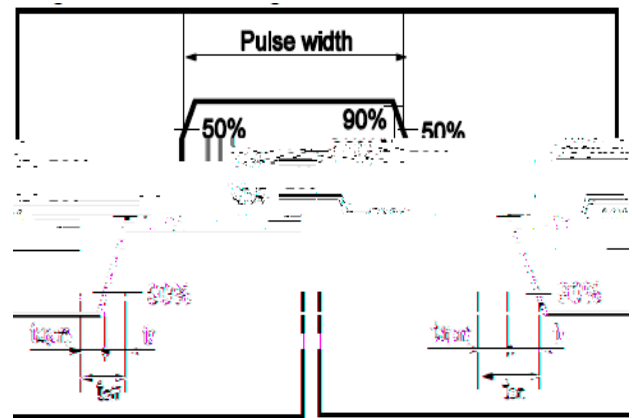


Fig.17 Avalanche Measurement Circuit

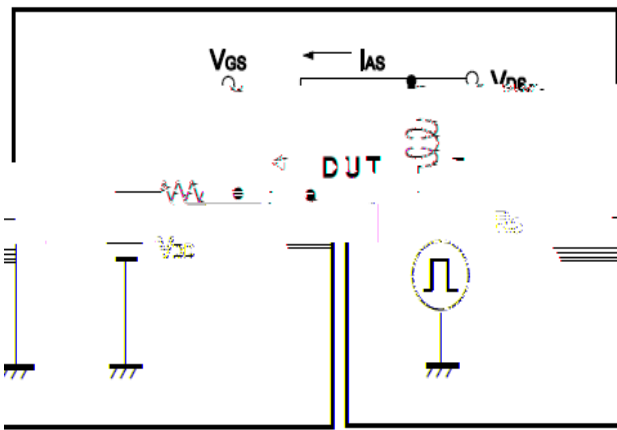


Fig.18 Avalanche Waveform

