

### General Description

It combines advanced trench MOSFET technology with a low resistance package to provide extremely low  $R_{DS(ON)}$ .

### Features

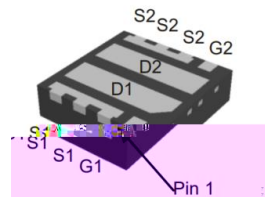
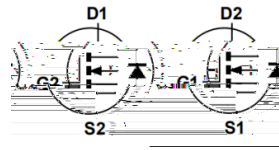
Trench technology  
 $R_{DS(ON)}$  to minimize conductive loss

Dual DIE in one package

### Application

Power Management in Notebook Computer,  
 Portable Equipment and Battery Powered  
 Systems

### Product Summary



X



### Ordering Information:

Part NO.	ZMD68305M
Marking	68305
Packing Information	REEL TAPE
Basic ordering unit (pcs)	5000

### Absolute Maximum Ratings ( $T_C = 25^\circ\text{C}$ )

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D @ T_C = 25^\circ\text{C}$	16	A
	$I_D @ T_C = 75^\circ\text{C}$	12	A
	$I_D @ T_C = 100^\circ\text{C}$	10	A
Pulsed Drain Current	$I_{DM}$	48	A
Total Power Dissipation	$P_D @ T_C = 25^\circ\text{C}$	11	W
Total Power Dissipation	$P_D @ T_A = 25^\circ\text{C}$	2.1	W
Operating Junction Temperature	$T_J$	-55 to 150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 to 150	$^\circ\text{C}$
Single Pulse Avalanche Energy	$E_{AS}$	75	mJ

**Thermal resistance**

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	$R_{thJC}$	-	-	11	° C/W
Thermal resistance, junction - ambient	$R_{thJA}$	-	-	60	° C/W
Soldering temperature, wavesoldering for 10s	$T_{sold}$	-	-	265	° C

**Electronic Characteristics**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	30			V
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{GS} = V_{DS}, I_D = 250\mu A$	1.2	1.8	2.5	V
Drain-Source Leakage Current	$I_{DSS}$	$V_{DS} = 30V, V_{GS} = 0V$			1.0	$\mu A$
Gate- Source Leakage Current	$I_{GSS}$	$V_{GS} = \pm 20V, V_{DS} = 0V$			$\pm 100$	nA
Static Drain-source On Resistance		$V_{GS} = 10V, I_D = 12A$		10	13	m $\Omega$
		$V_{GS} = 4.5V, I_D = 6A$		14	18	m $\Omega$
Forward Transconductance	$g_{FS}$	$V_{DS} = 25V, I_D = 10A$		5		s





Fig.7 Safe Operating A

Fig.13 Switching Time Measurement Circuit

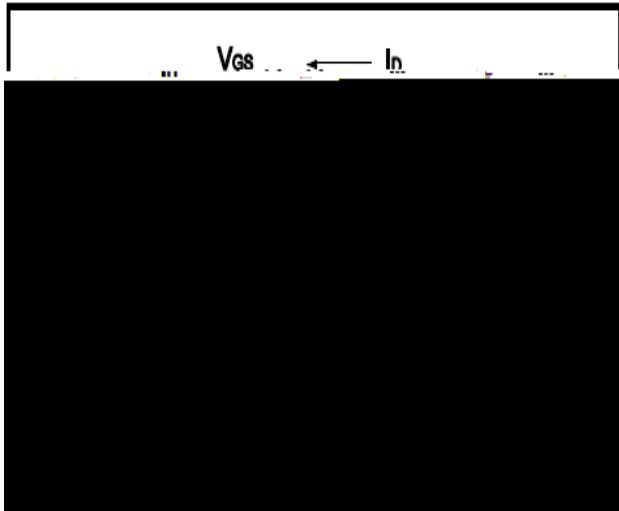


Fig.14 Gate Charge Waveform

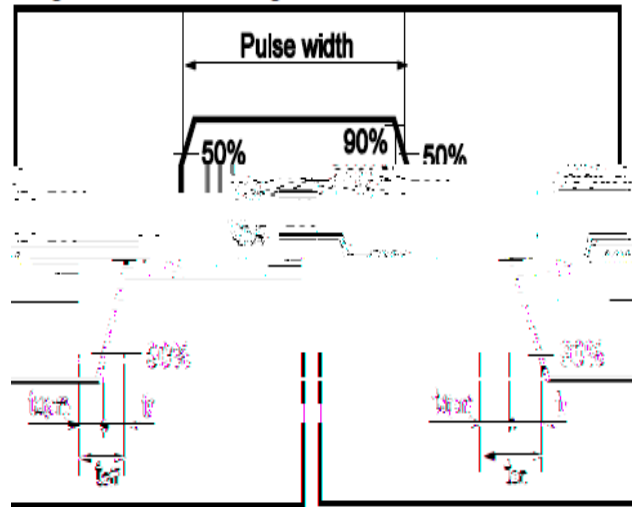


Fig.15 Avalanche Measurement Circuit

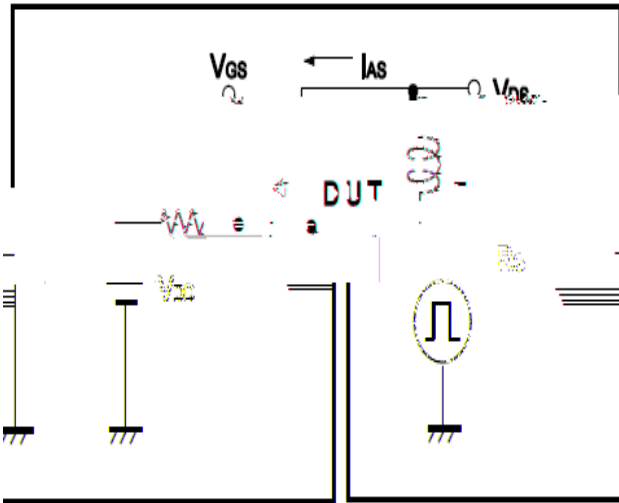
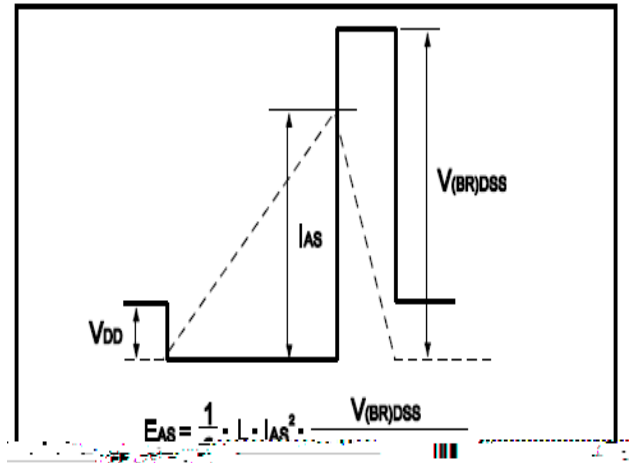


Fig.16 Avalanche Waveform





Dimensions (DFN3 x 3 DUAL)

