

General Description

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

Features

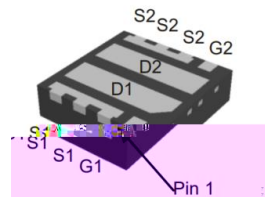
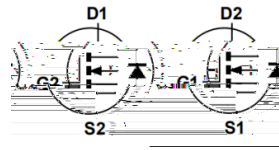
Trench technology
 $R_{DS(ON)}$ to minimize conductive loss

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}	± 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	μA
Gate- Source Leakage Current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 100	nA
Static Drain-source On Resistance		$V_{GS} = 10V, I_D = 12A$		10	13	m Ω
		$V_{GS} = 4.5V, I_D = 6A$		14	18	m Ω
Forward Transconductance	g_{FS}	$V_{DS} = 25V, I_D = 10A$		5		S



Fig.7 Safe Operating A

Fig.13 Switching Time Measurement Circuit

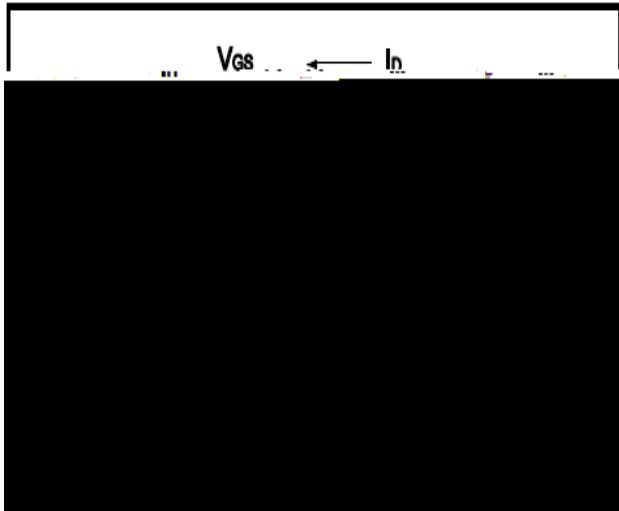


Fig.14 Gate Charge Waveform

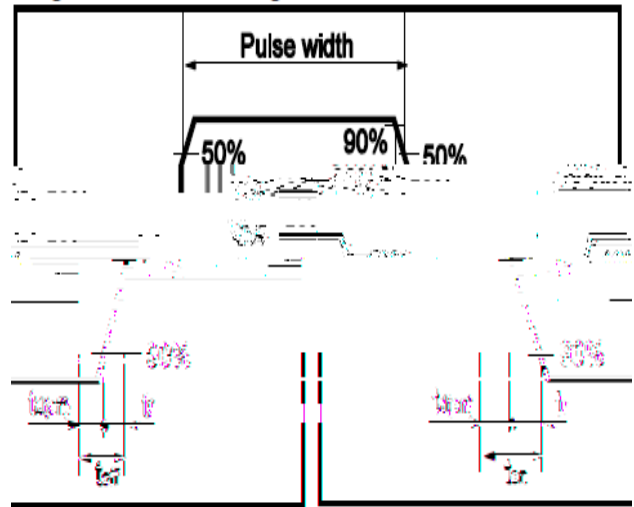


Fig.15 Avalanche Measurement Circuit

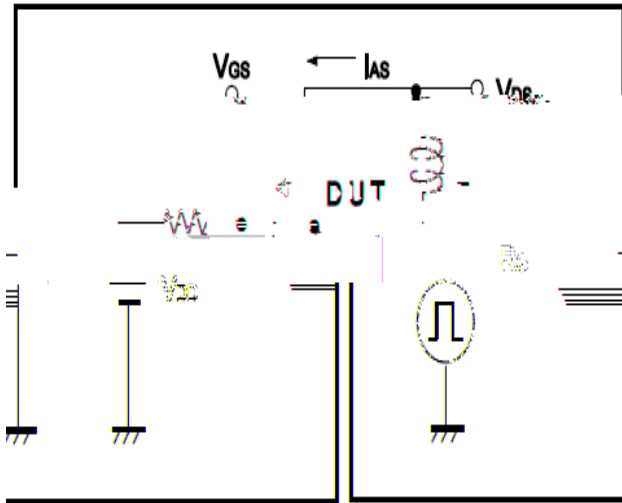
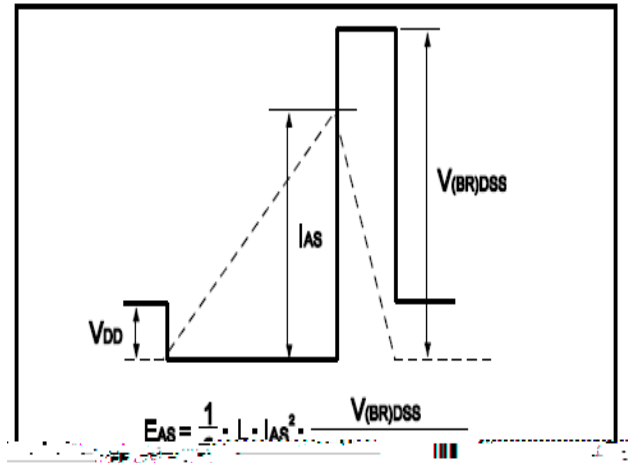


Fig.16 Avalanche Waveform





Dimensions (DFN3 x 3 DUAL)

