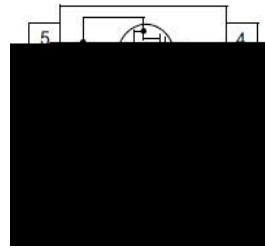


It combines advanced trench MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$.

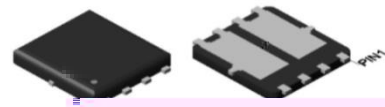
Trench technology
 $R_{DS(ON)}$ to minimize conductive loss



Dual DIE in one package



DC/DC Converters in Computing
 Isolated DC/DC Converters in Telecom and Industrial



x

	ZMD68306N
	ZMD68306
	REEL TAPE
	3000

$T_C = 25$ Q1,Q2

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	$I_{D@T_C=25}$	40	A
	$I_{D@T_C=75}$	30.4	A
	$I_{D@T_C=100}$	25.2	A
Pulsed Drain Current	I_{DM}	120	A
Total Power Dissipation	$P_D@T_C=25$	60	W
Total Power Dissipation	$P_D@T_A=25$	1.8	W
Operating Junction Temperature	T_J	-55 to 150	
Storage Temperature	T_{STG}	-55 to 150	
Single Pulse Avalanche Energy@L=0.1mH	E_{AS}	150	mJ

**Thermal resistance(Q1,Q2)**

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R_{thJC}	-	-	2.1	° C/W
Thermal resistance, junction - ambient	R_{thJA}	-	-	70	° C/W
Soldering temperature, wavesoldering for 10s	T_{sold}	-	-	265	° C

(Q1,Q2)

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		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		$V_{GS} = 10V, I_D = 15A$				
		$V_{GS} = 4.5V, I_D = 10A$				
Forward Transconductance	g_{FS}	$V_{DS} = 25V, I_D = 10A$				

(Q1,Q2)

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	C_{iss}	$f = 1MHz$	-	1500	-	pF
Output capacitance	C_{oss}		-	215	-	
Reverse transfer capacitance	C_{rss}		-	165	-	

Gate Charge characteristics($T_a = 25$)(Q1,Q2)

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Total gate charge	Q_g	$V_{DD} = 25V$	-	31	-	nC
Gate - Source charge	Q_{gs}	$I_D = 5A$	-	4.2	-	
Gate - Drain charge	Q_{gd}	$V_{GS} = 10V$	-	8.7	-	

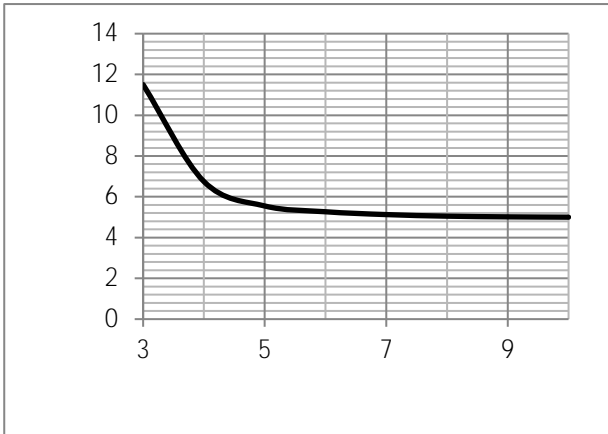


Fig.9 Switching Time Measurement Circuit

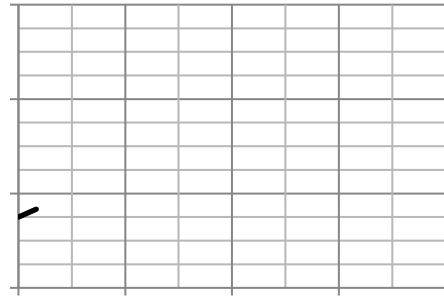


Fig.10 Gate Charge Waveform

Fig.11 Switching Time Measurement Circuit

Fig.12 Gate Charge Waveform

Fig.13 Avalanche Measurement Circuit

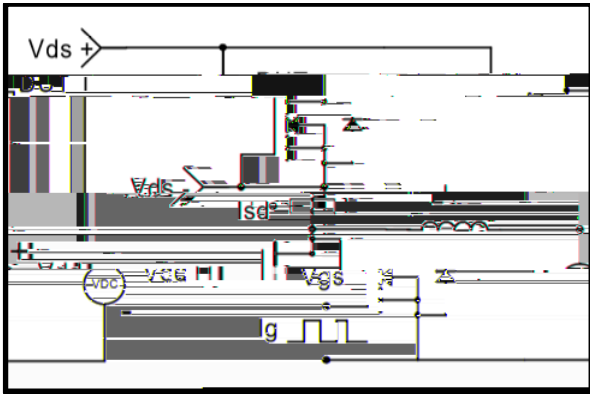
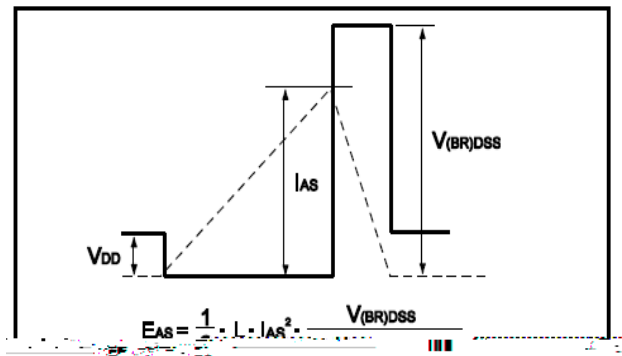


Fig.14 Avalanche Waveform





sions DFN5x6

