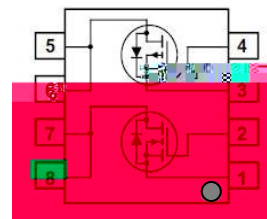


**Product Summary**

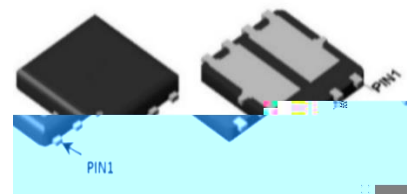
It combines advanced trench MOSFET technology with a low resistance package to provide extremely low  $R_{DS(ON)}$ . It combines one N channel MOSFET and one P channel MOSFET.



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



Dual DIE in one package



Power Management in Notebook Computer  
 BLDC Motor driver

Part NO.	ZMC88401N
Marking	ZMC88401
Packing Information	REEL TAPE
Basic ordering unit (pcs)	3000

**N Channel Absolute Maximum Ratings  $T_C = 25$** 

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	A
	$I_D @ T_C = 100$	25	A
Pulsed Drain Current	$I_{DM}$	120	A
Total Power Dissipation	$P_D @ T_C = 25$	43	W
Total Power Dissipation	$P_D @ T_A = 25$	2.2	W
Operating Junction Temperature	$T_J$	-55 to 150	
Storage Temperature	$T_{STG}$	-55 to 150	
Single Pulse Avalanche Energy	$E_{AS}$	140	mJ

**P Channel Absolute Maximum Ratings  $T_C = 25$** 

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	-40	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D @ T_C = 25$	-45	A
	$I_D @ T_C = 75$	-34	A
	$I_D @ T_C = 100$	-28	A
Pulsed Drain Current	$I_{DM}$	-135	A
Total Power Dissipation	$P_D @ T_C = 25$	43	W
Total Power Dissipation	$P_D @ T_A = 25$	2.2	W
Operating Junction Temperature	$T_J$	-55 to 150	
Storage Temperature	$T_{STG}$	-55 to 150	
Single Pulse Avalanche Energy	$E_{AS}$	35	mJ

**Thermal resistance**

Parameter	Symbol	Min.	Typ.	Max.	Unit
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Input capacitance	$C_{iss}$	f = 1MHz	-	1930	-	pF
Output capacitance	$C_{oss}$		-	154	-	
Reverse transfer capacitance	$C_{rss}$		-	110	-	
Total gate charge	$Q_g$	$V_{DD} = 25V$	-	30	-	nC
Gate - Source charge	$Q_{gs}$	$I_D = 15A$	-	5.9	-	
Gate - Drain charge	Q	$V_{GS} = 10V$				





Test Circuit

Fig.1 Switching Time Measurement Circuit

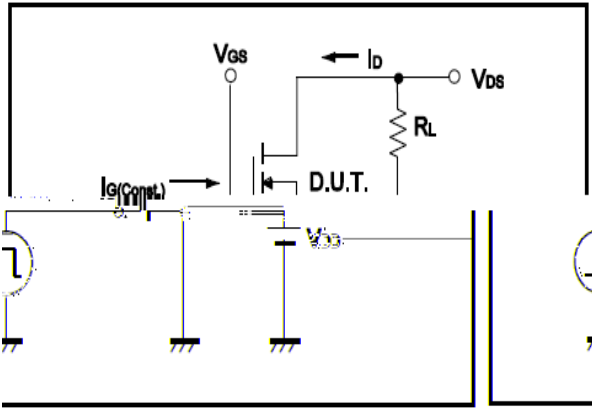


Fig.2 Gate Charge Waveform

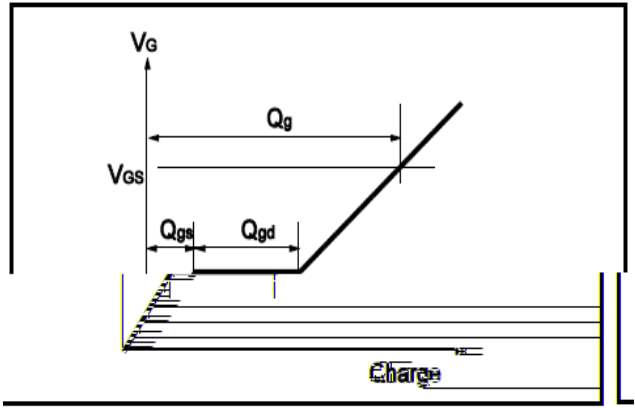


Fig.3 Switching Time Measurement Circuit

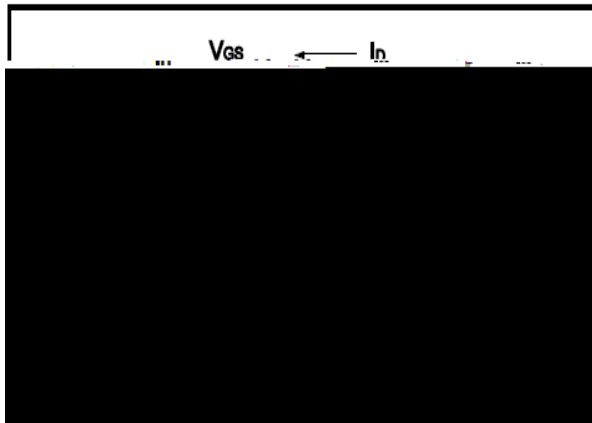


Fig.4 Gate Charge Waveform

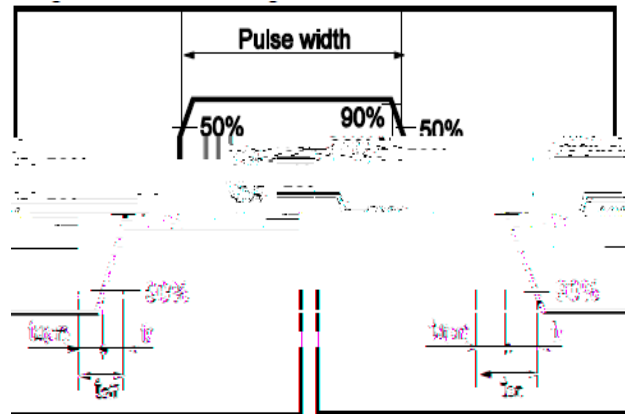


Fig.5 Avalanche Measurement Circuit

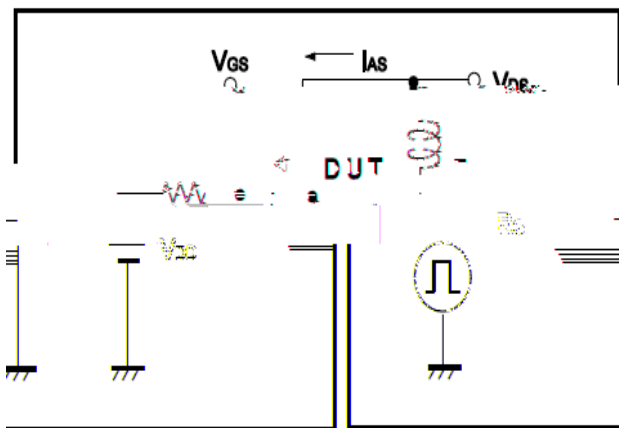
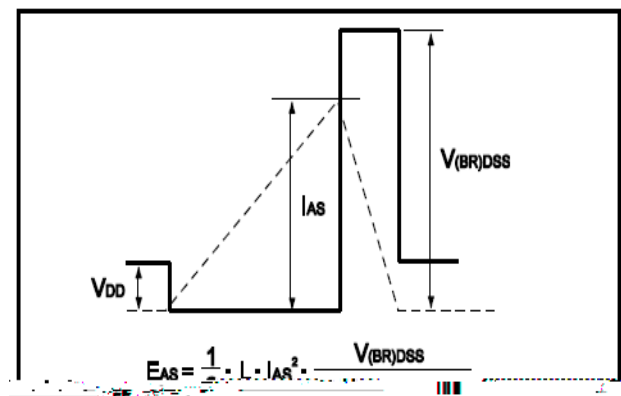


Fig.6 Avalanche Waveform





**sions DFN5x6**

