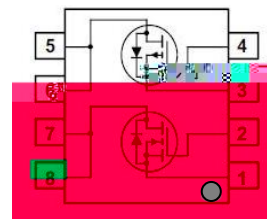


Product Summary

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.	ZMC88403N
Marking	ZMC88403
Packing Information	REEL TAPE
Basic ordering unit (pcs)	3000

Thermal resistance

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R_{thJC}	-	-	1.5	$^{\circ}C/W$
Thermal resistance, junction - ambient	R_{thJA}	-	-	37	$^{\circ}C/W$
Soldering temperature, wavesoldering for 10s	T_{sold}	-	-	265	$^{\circ}C$

N Channel Absolute Maximum Ratings $T_C = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	$I_D@TC=25$	26	A
	$I_D@TC=75$	20	A
	$I_D@TC=100$	16	A

Pulsed Drain Current	I_{DM}	78	A
Total Power Dissipation	$P_D@T_C=25$	42	W
Total Power Dissipation	$P_D@T_A=25$	1.7	W
Operating Junction Temperature	T_J	-55 to 150	
Storage Temperature	T_{STG}	-55 to 150	
Single Pulse Avalanche Energy	E_{AS}	55	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}	± 20	V
Continuous Drain Current	$I_{D@T_C=25}$	-18	A
	$I_{D@T_C=75}$	-13.6	A
	$I_{D@T_C=100}$	-11	A
Pulsed Drain Current	I_{DM}	-54	A
Total Power Dissipation	$P_D@T_C=25$	42	W
Total Power Dissipation	$P_D@T_A=25$	1.7	W
Operating Junction Temperature	T_J	-55 to 150	
Storage Temperature	T_{STG}	-55 to 150	
Single Pulse Avalanche Energy	E_{AS}	51	mJ

N Channel Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS} = 0V, I_D = 250\mu A$	40			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}	$V_{DS} = 40V, V_{GS} = 0V$			1.0	μA
Gate- Source Leakage Current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$...100	nA
Static Drain-source On Resistance		$V_{GS} = 10V, I_D = 8A$		13	17	m
		$V_{GS} = 4.5V, I_D = 6A$		18	24	m
Forward Trans conductance	g_{FS}	$V_{DS} = 25V, I_D = 6A$		10		S

Source-drain voltage 0 0 1 223.1

N Channel characteristics curve

Fig.1 Power Dissipation Derating Curve

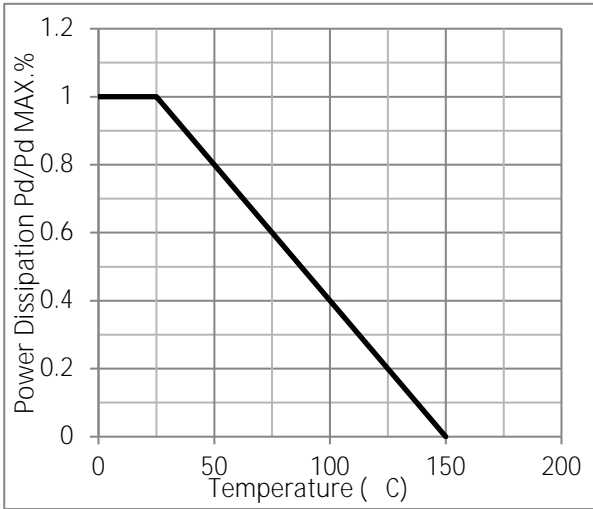


Fig.2 Typical output Characteristics

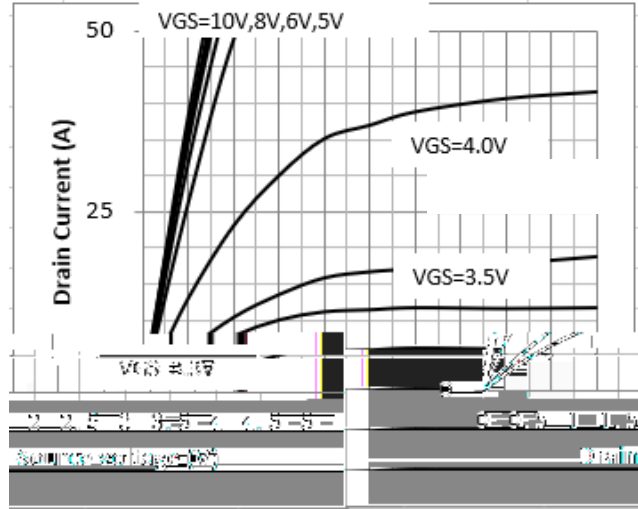


Fig.3 Threshold Voltage V.S Junction Temperature

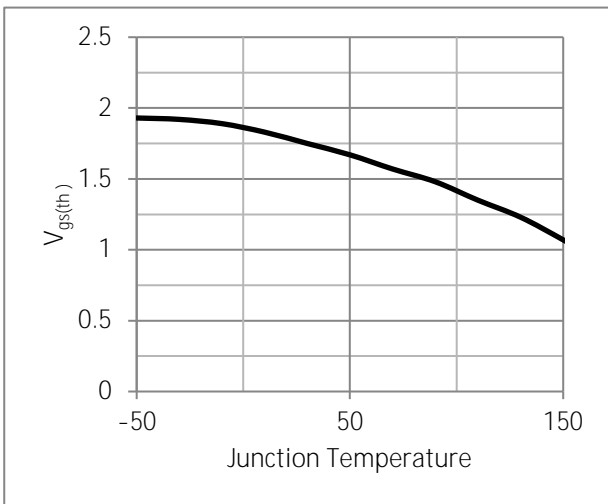
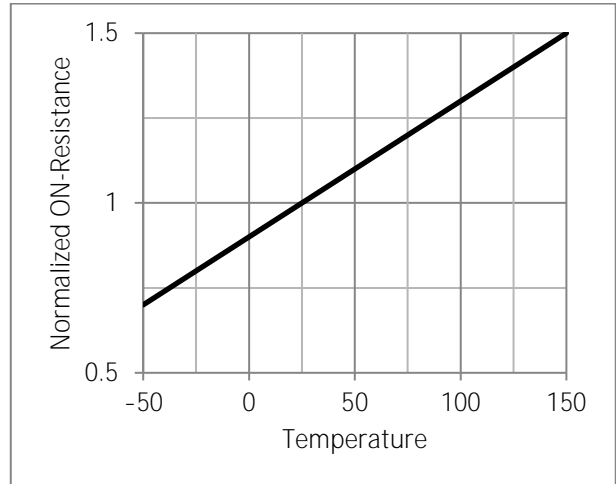
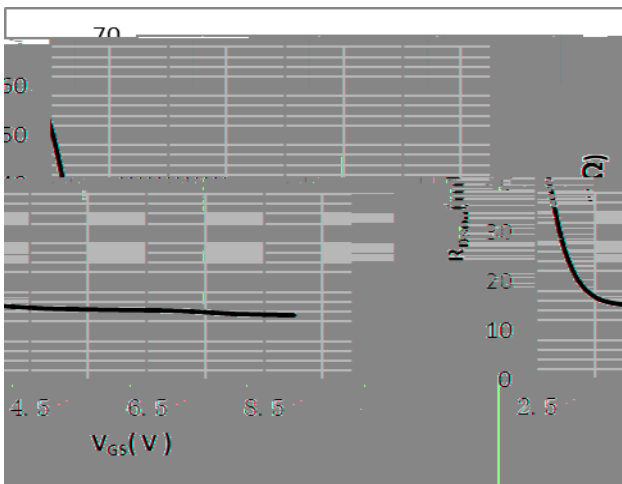
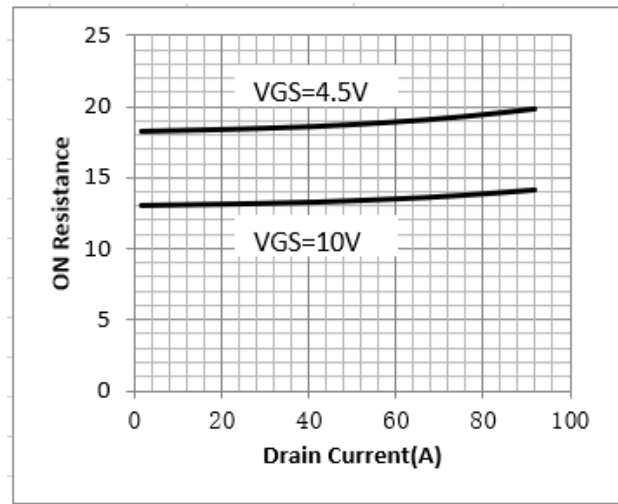


Fig.4 Resistance V.S Drain Current





Test Circuit

Fig.1 Switching Time Measurement Circuit

Fig.2 Gate Charge Waveform

Fig.3 Fig.



sions DFN5x6

