



**Product Summary**

The ZMC88405D 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.	ZMC88405D
Marking	ZMC88405
Packing 19.322.43 261.77 19.32 0 G[4]TJETQ008	

**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	$I_{D@TC=25}$	28	A
	$I_{D@TC=75}$	19	A
	$I_{D@TC=100}$	15.7	A
Pulsed Drain Current	$I_{DM}$	60	A
Total Power Dissipation( $TC=25$ )	$P_D@TC=25$	50	W
Total Power Dissipation( $TA=25$ )	$P_D@TA=25$	2.0	W
Operating Junction Temperature	$T_J$	-55 to 150	
Storage Temperature	$T_{STG}$	-55 to 150	
Single Pulse Avalanche Energy	$E_{AS}$	35	mJ







**N Channel characteristics curve**

Fig.1 Power Dissipation Derating Curve

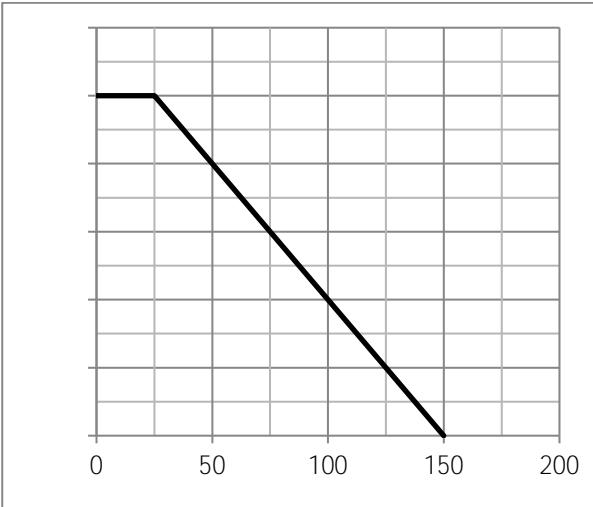


Fig.2 Typical output Characteristics

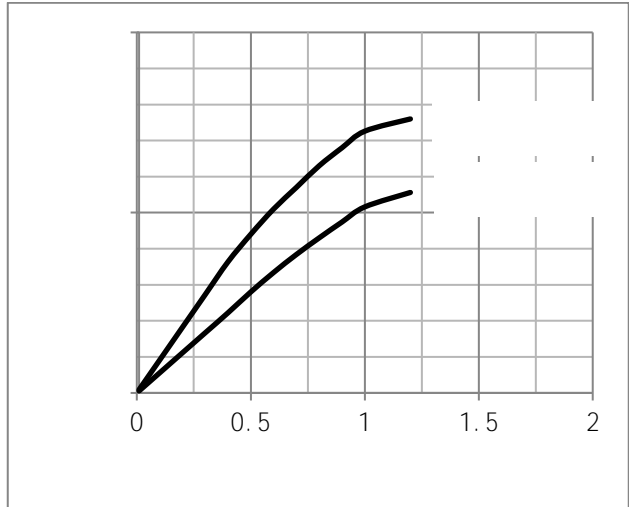


Fig.3 Threshold Voltage V.S Junction Temperature

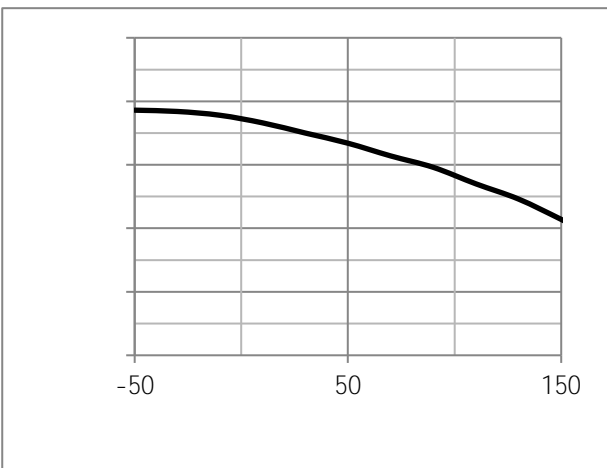
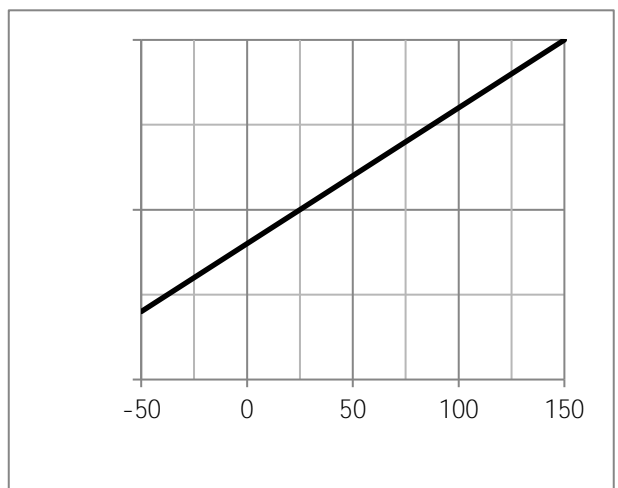
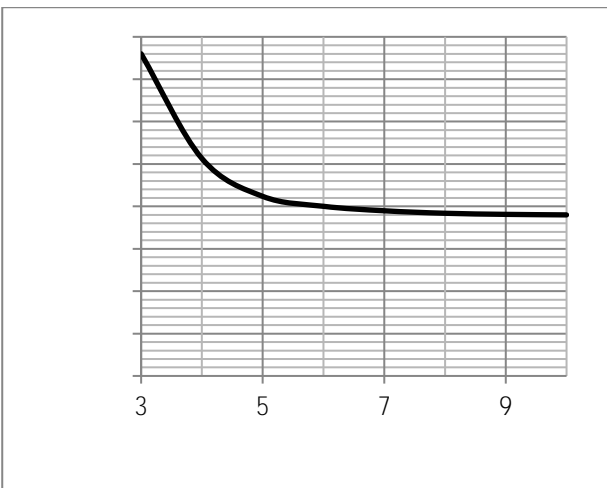
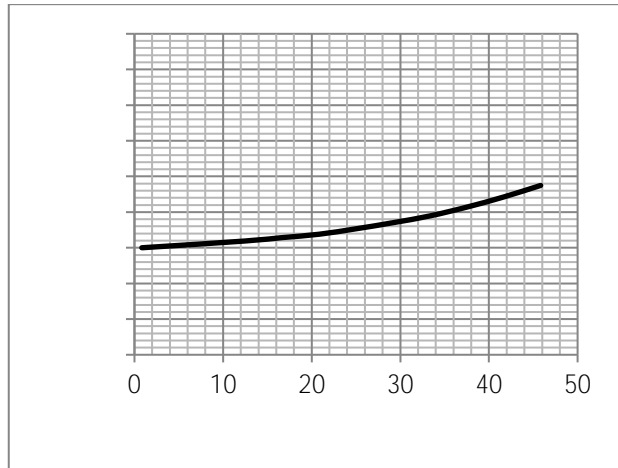


Fig.4 Resistance V.S Drain Current





**P Channel characteristics curve**

Fig.1 Power Dissipation Derating Curve

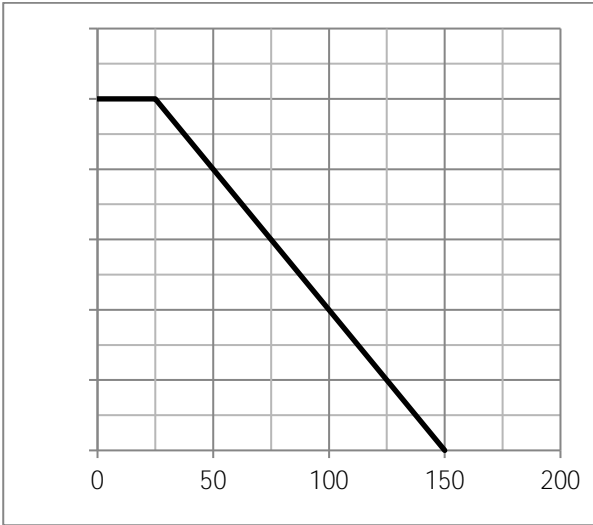


Fig.2 Typical output Characteristics

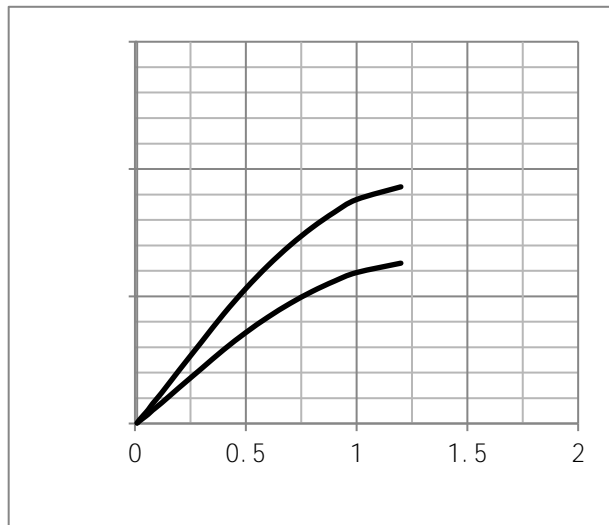


Fig.3 Threshold Voltage V.S Junction Temperature

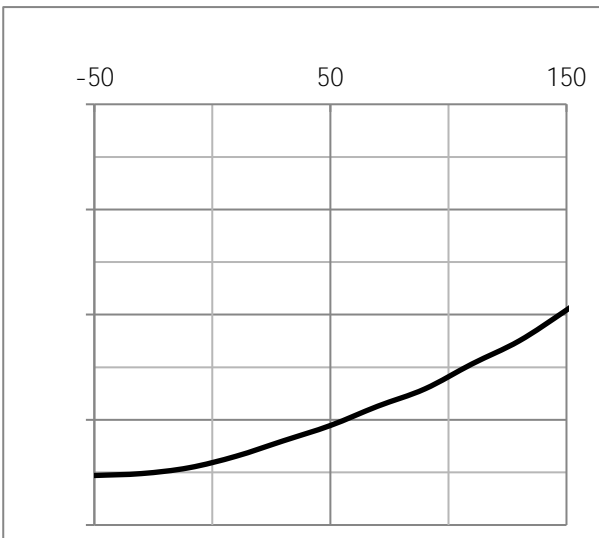
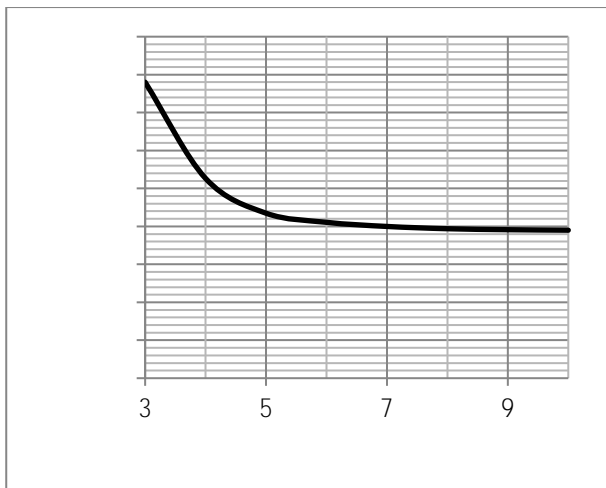
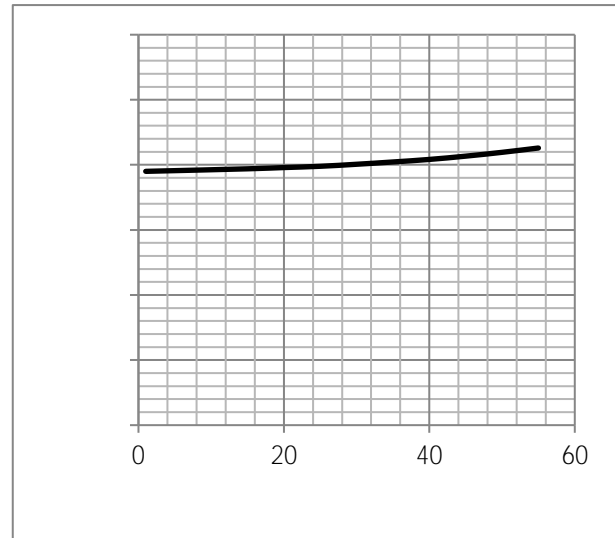


Fig.4 Resistance V.S Drain Current





Test Circuit

Fig.1 Switching Time Measurement Circuit

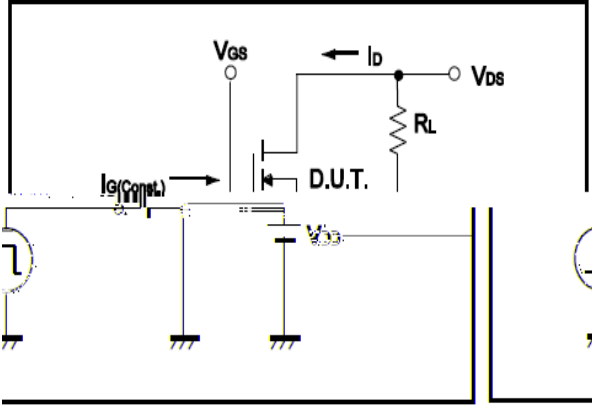


Fig.2 Gate Charge Waveform

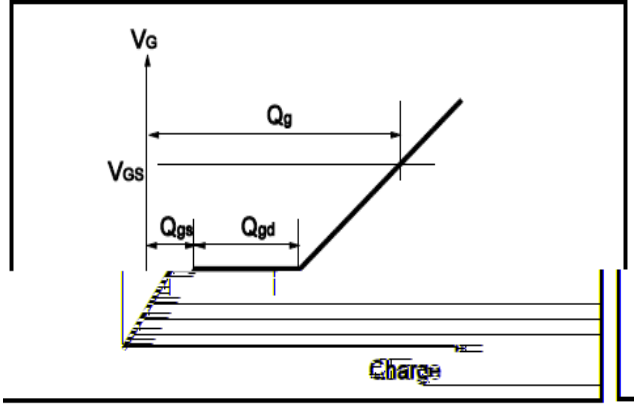


Fig.3 Switching Time Measurement Circuit

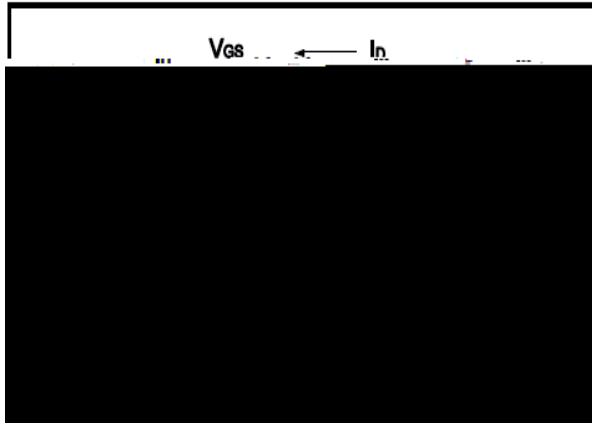


Fig.4 Gate Charge Waveform

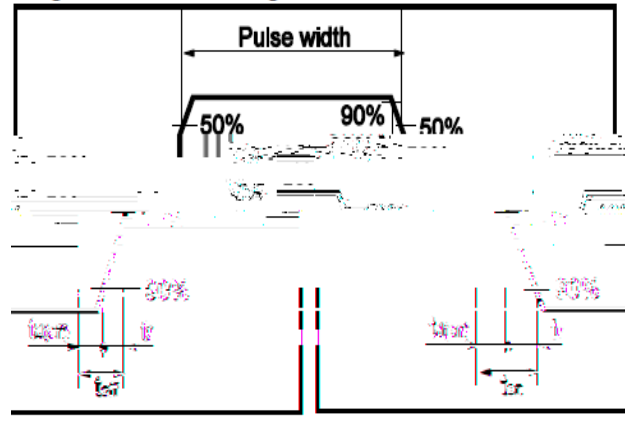


Fig.5 Avalanche Measurement Circuit

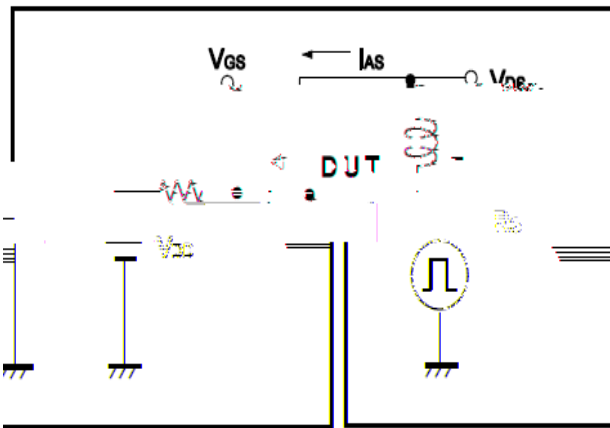
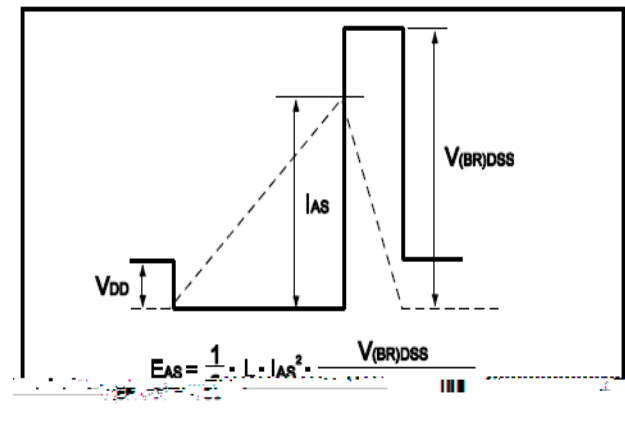


Fig.6 Avalanche Waveform





(TO-252-4)

Unit: mm

