● General Description

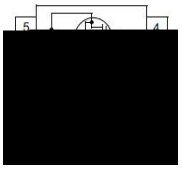
The ZMD68605N combines advanced trench MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$.

● Features

Trench technology

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

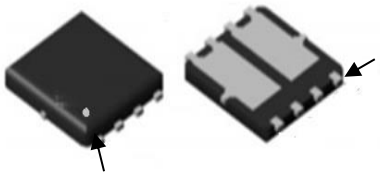
● Product Summary



●Application

Synchronus Rectification in DC/DC and AC/DC Converters

Industrial and Motor Drive applications



●Ordering Information:

Part NO.	ZMD68605N
Marking	ZMD68605
Packing Information	REEL TAPE
Basic ordering unit (pcs)	3000

●Absolute Maximum Ratings T_C =25

Parameter	**Symbol**	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	$I_{D@}T_C$=25	32	A
	$I_{D@}T_C$=75	24	A
	$I_{D@}T_C$=100	20	A
Pulsed Drain Current	I_{DM}	96	A
Total Power Dissipation	$P_D@T_C$=25	60	W
Total Power Dissipation	$P_D@T_A$=25	3.6	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}	60	mJ

Diode Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
				7.6		ns
				2.5		ns

Note: Pulse Test : ;

Device mounted on FR-4 substrate PC board, 2oz copper, with thermal bias to bottom layer 1inch square copper plate

Fig.1 Gate-Charge Characteristics

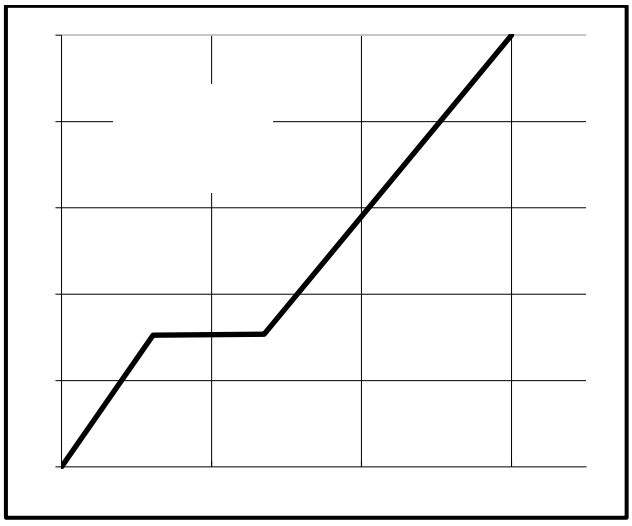


Fig.2 Capacitance Characteristics

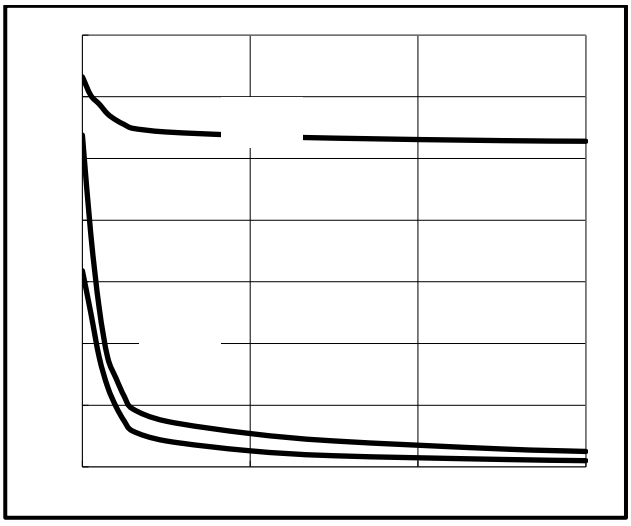


Fig.3 Power Dissipation

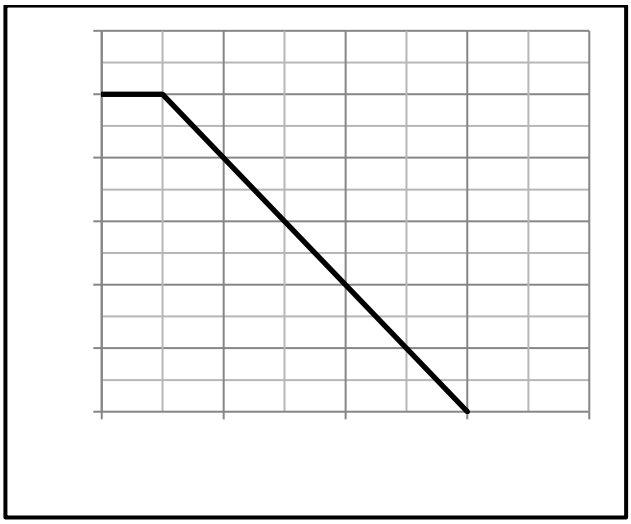


Fig.4 Typical output Characteristics

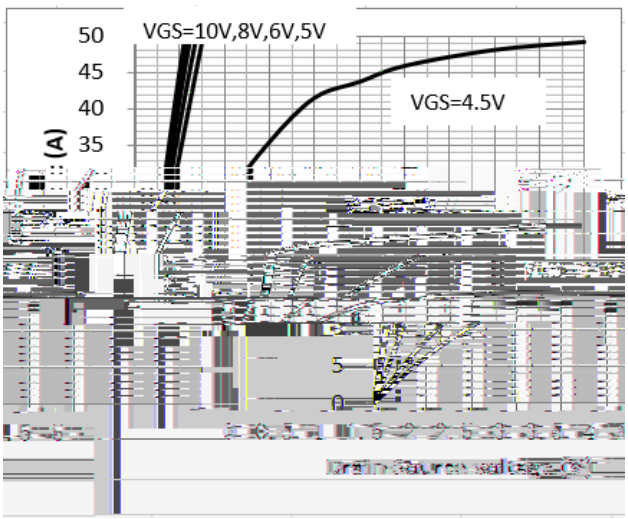


Fig.5 Threshold Voltage V.S Junction Temperature

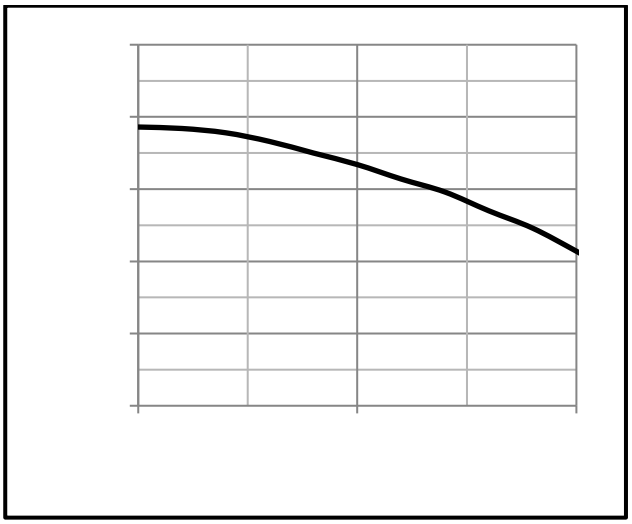
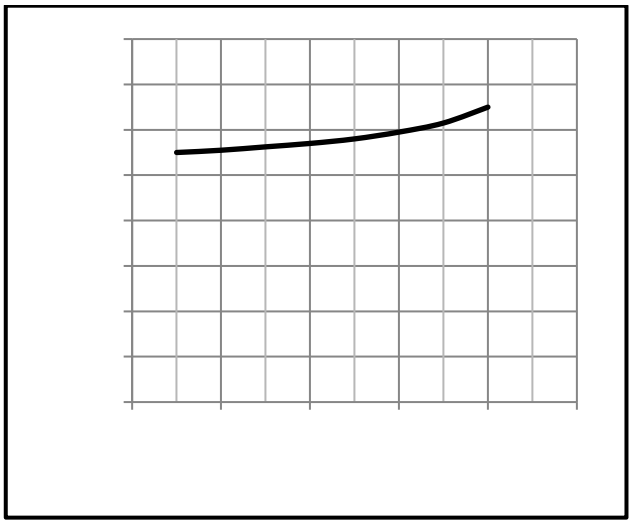


Fig.6 Resistance V.S Drain Current



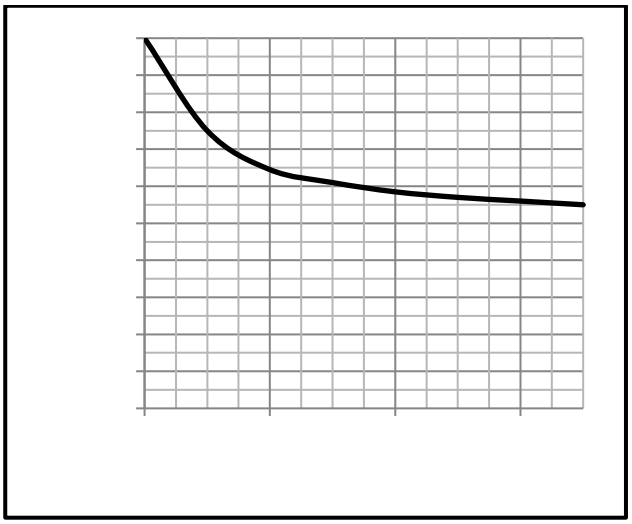


Fig.9 SOA MaximumQa49Rfe Operating Area

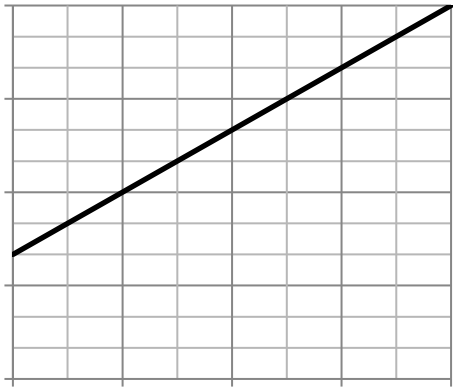


Fig.10 ID-Junction Temperature

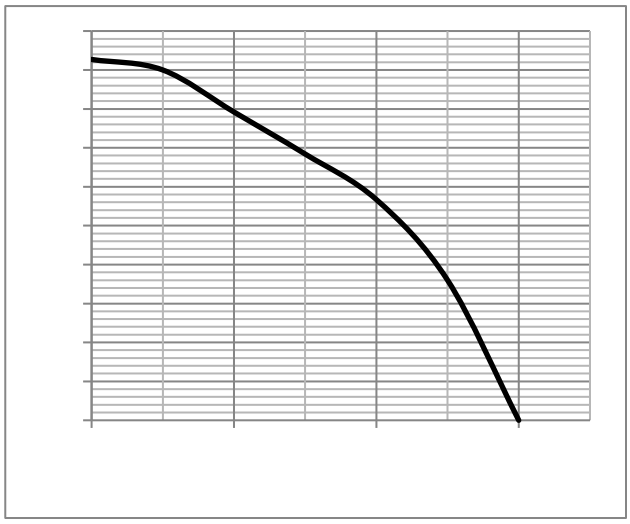


Fig.13 Switching Time Measurement Circuit

Fig.17 Avalanche Measurement Circuit

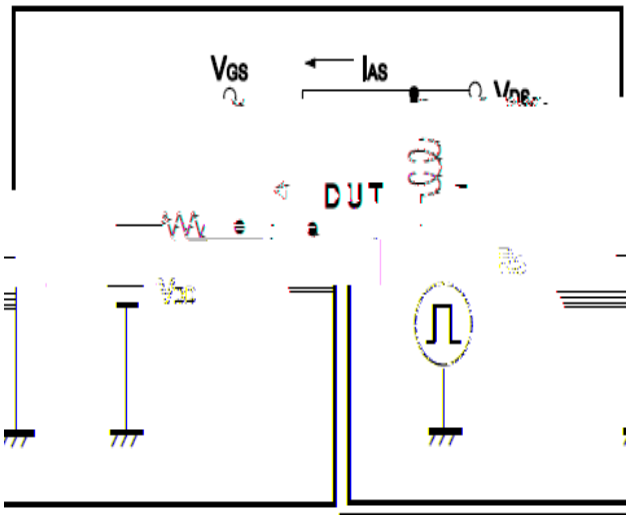
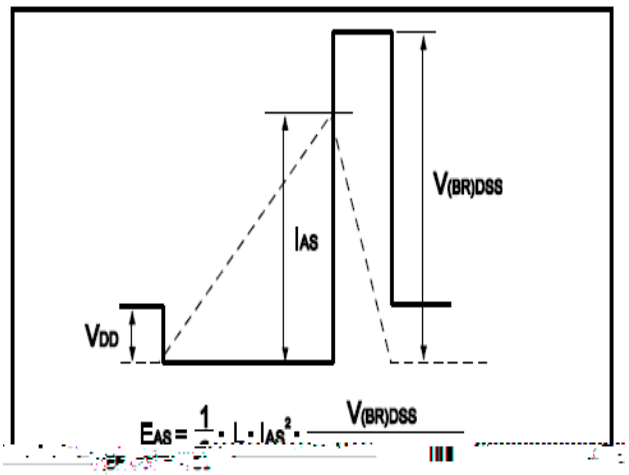


Fig.18 Avalanche Waveform



●Dimensions DFN5×6

Unit: mm