

**General Description**

The ZM098N06M 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**
 $V_{DS} = 60V$ 
 $R_{DS(ON)} = 10m\Omega$ 
 $I_D = 50A$ 
**Application**

nd Synchronous Rectifier

**Ordering Information:**

Part NO.	ZM098N06M
Marking	098N06
Packing Information	REEL TAPE
Basic ordering unit (pcs)	

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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	60	V
Gate-Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_{D@TC=25}$	50	A
	$I_{D@TC=75}$	38	A
	$I_{D@TC=100}$	31	A
Pulsed Drain Current	$I_{DM}$	104	A
Total Power Dissipation	$P_D@T_C=25$	46	W
Total Power Dissipation	$P_D@T_A=25$	2.3	W
Operating Junction Temperature	$T_J$	-55 to 150	
Storage Temperature	$T_{STG}$	-55 to 150	
Avalanche Current	$I_{AS} I_{AR}$	40	A

**Thermal resistance**

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	$R_{thJC}$	-	-	2.7	$^{\circ}C/W$
Thermal resistance, junction - ambient	$R_{thJA}$	-	-	53	$^{\circ}C/W$
Soldering temperature, wavesoldering for 10s	$T_{sold}$	-	-	265	$^{\circ}C$

**Electronic Characteristics**

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	60			V
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{GS} = V_{DS}, I_D = 250\mu A$	1.2	1.7	2.5	V

Drain-Source Leakage Current  $I_{D2}$  22.08 ref3

Fig.1 Gate-Charge Characteristics

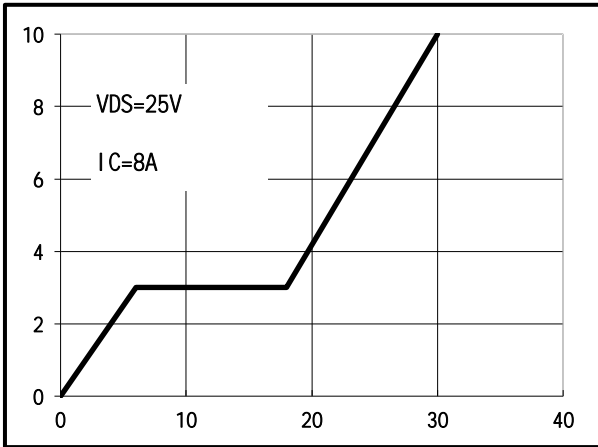


Fig.2 Capacitance Characteristics

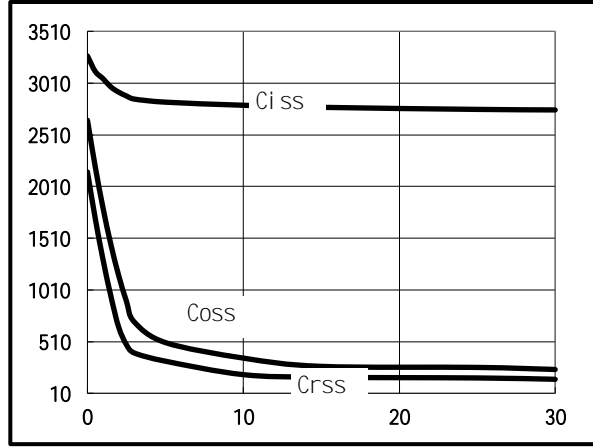


Fig.3 Power Dissipation

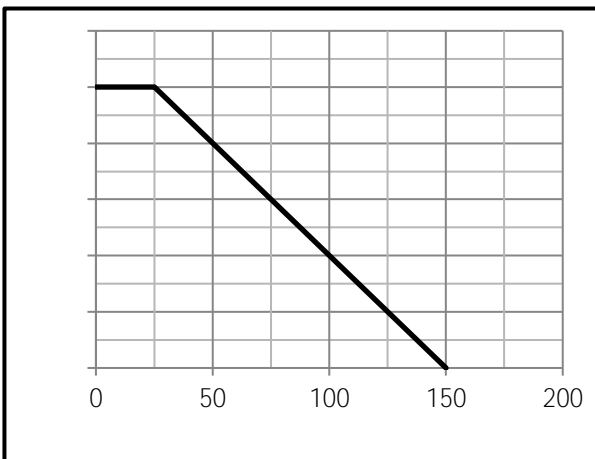


Fig.4 Typical output Characteristics

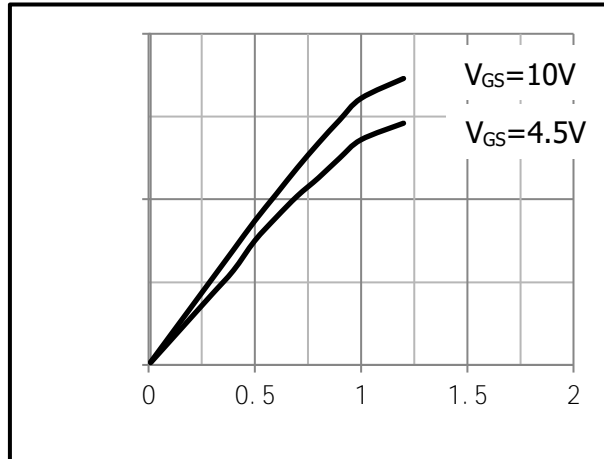


Fig.5 Threshold Voltage V.S Junction Temperature

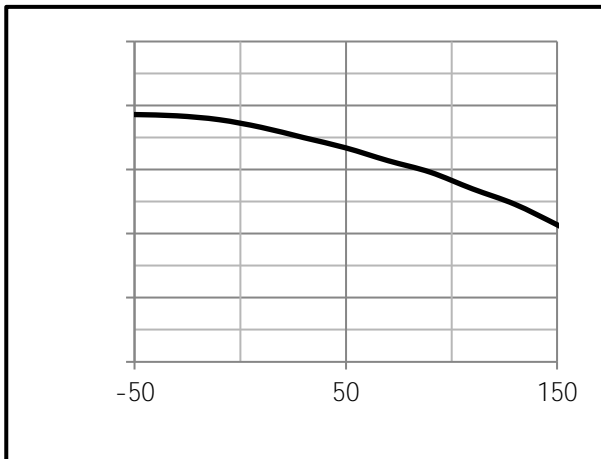


Fig.6 Resistance V.S Drain Current

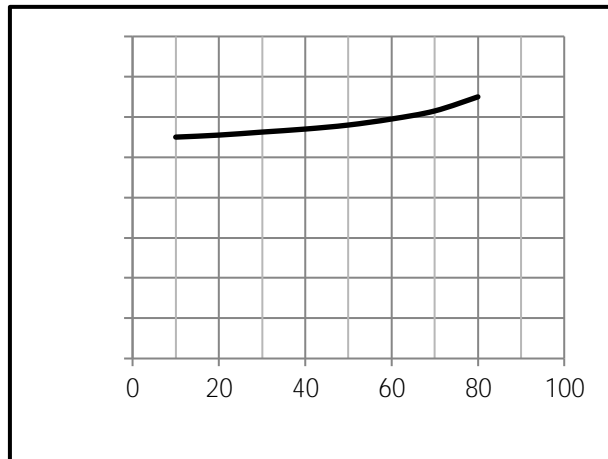




Fig.7 On-Resistance VS Gate Source Voltage

Fig.8 On-Resistance V.S Junction Temperature

Fig.9 Switching Time Measurement Circuit

Fig.10 Gate Charge Waveform

Fig.11 Switching Time Measurement Circuit

Fig.12 Gate Charge Waveform

