



Product Summary

The ZM098N06P combines advanced trench MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$. This device is ideal for load switch and battery protection applications.



Advance high cell density Trench technology
 $R_{DS(ON)}$ to minimize conductive loss
 fast switching



nd Synchronous Rectifier

Information:

	Bulk Tube
	500

$T_C = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	20	V
Continuous Drain Current($TC=25$)	$I_{D@TC=25}$	55	A
	$I_{D@TC=75}$	42	A
	$I_{D@TC=100}$	35	A
Pulsed Drain Current	I_{DM}	104	A
Total Power Dissipation($TC=25$)	$P_{D@TC=25}$	120	W
Total Power Dissipation($TA=25$)	$P_{D@TA=25}$	5	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}	80	mJ



Avalanche Current@L=0.1mH	I_{AS}	40	A
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Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R_{thJC}	-	-	1	$^{\circ}C/W$
Thermal resistance, junction - ambient	R_{thJA}	-	-	25	$^{\circ}C/W$
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		2.5	V
Drain-Source Leakage Current	I_{DSS}	$V_{DS}=60V, V_{GS}=0V$			1.0	μA
Gate- Source Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$			100	nA
Static Drain-source On Resistance		$V_{GS}=10V, I_D=24A$				
		$V_{GS}=4.5V, I_D=12A$				
Forward Transconductance	g_{FS}	$V_{DS}=25V, I_D=10A$				
Source-drain voltage	V_{SD}	$I_S=24A$				

Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	C_{iss}	$f = 1MHz$	-	3350	-	pF
Output capacitance	C_{oss}		-	155	-	
Reverse transfer capacitance	C_{rss}		-	135	-	

Fig.1 SOA Maximum Safe Operating Area

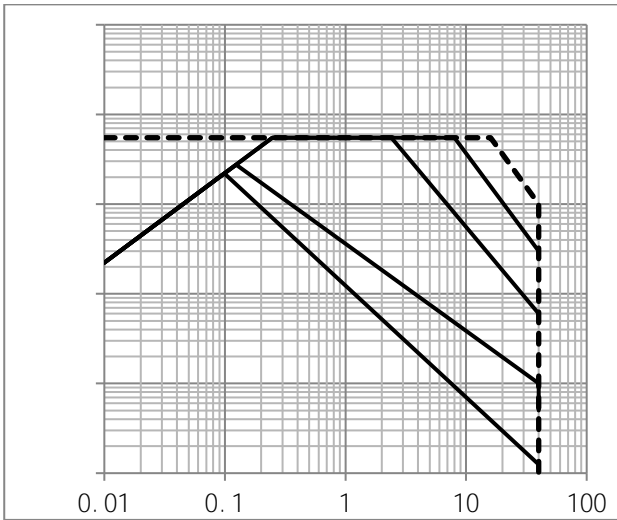


Fig.2 ID-Junction Temperature

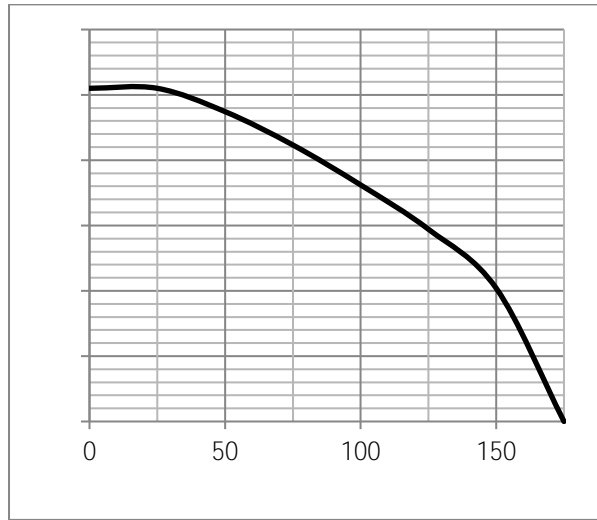


Fig.3 Gate-Charge Characteristics

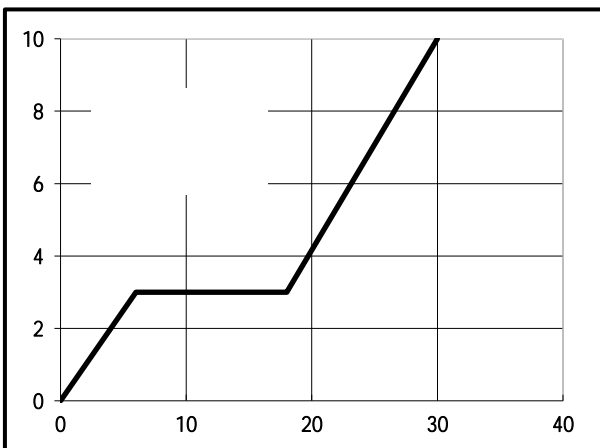


Fig.4 Capacitance Characteristics



Fig.5 Power Dissipation

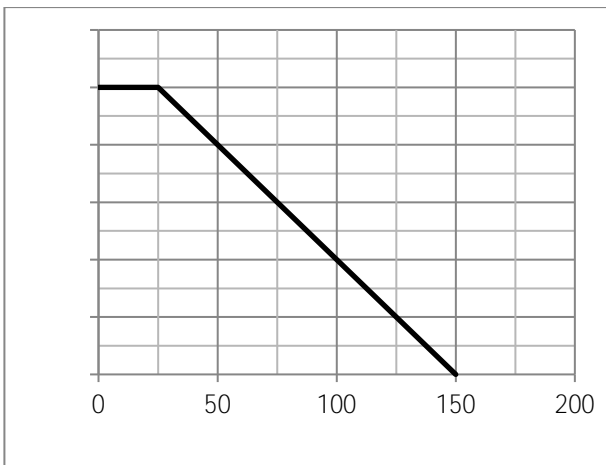


Fig.6 Typical output Characteristics

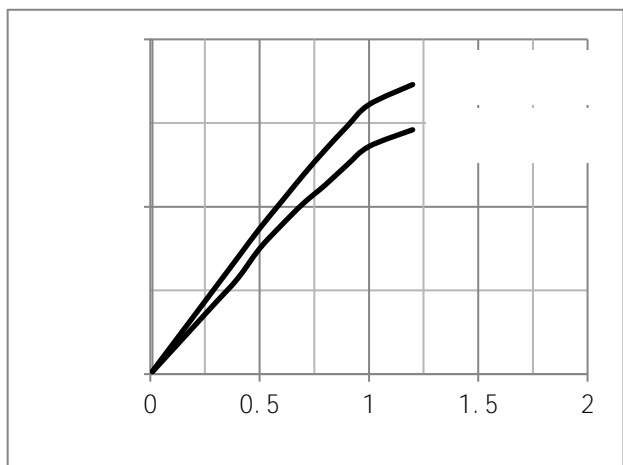




Fig.7 Threshold Voltage V.S Junction Temperature

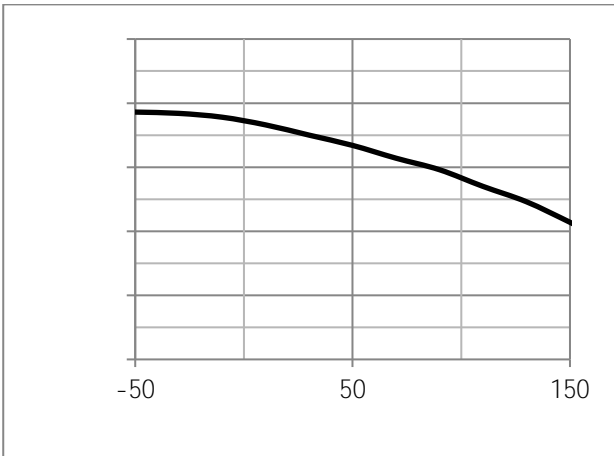


Fig.8 Resistance V.S Drain Current

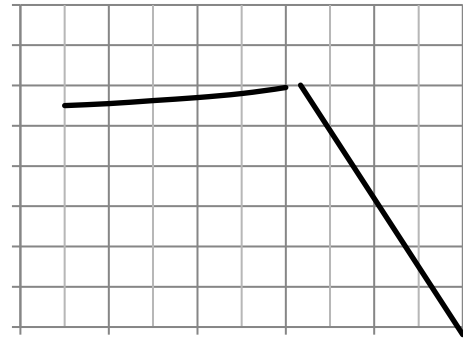


Fig.11 Switching Time Measurement Circuit

Fig.12 Gate Charge Waveform

