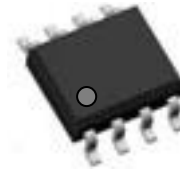


B

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

device constructure
 $R_{DS(ON)}$ to minimize conduction loss

Product Summary


Synchronous Rectification for AC-DC/DC-DC converter
 Oring switches
 Power Tools

D

Part NO.	ZMS130N08S
Marking	ZMS130N08
Packing Information	REEL TAPE
Basic ordering unit (pcs)	4000

 $T_C = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	80	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	$I_D @ T_C = 25$	9.5	A
	$I_D @ T_C = 75$	7.2	A
	$I_D @ T_C = 100$	6.0	A
Pulsed Drain Current	I_{DM}	34	A
Total Power Dissipation	$P_D @ T_C = 25$	70	W
Total Power Dissipation	$P_D @ T_A = 25$	2.5	W
Operating Junction Temperature	T_J	-55 to 150	
Storage Temperature	T_{STG}	-55 to 150	
Single Pulse Avalanche Energy	E_{AS}	40	mJ

**Thermal resistance**

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R_{thJC}	-	-	1.7	C/W
Thermal resistance, junction - ambient	R_{thJA}	-	-	50	C/W
Soldering temperature, wavesoldering for 10s	T_{sold}	-	-	265	C

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS} = 0V, I_D = 250\mu A$	80			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}	$V_{DS} = 80V, V_{GS} = 0V$			1.0	μA
Gate- Source Leakage Current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			100	nA
Static Drain-source On Resistance		$V_{GS} = 10V, I_D = 10A$				
		$V_{GS} = 4.5V, I_D = 5A$				
Forward Transconductance	g_{FS}	$V_{DS} = 25V, I_D = 10A$				
Source-drain voltage	V_{SD}	$I_S = 10A$				

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	C_{iss}	$f = 1MHz$	-	890	-	pF
Output capacitance	C_{oss}		-	423	-	
Reverse transfer capacitance	C_{rss}		-	8.1	-	

Gate Charge characteristics ($T_a = 25$)

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Total gate charge	Q_g	$V_{DD} = 25V$	-	11	-	nC
Gate - Source charge	Q_{gs}	$I_D = 8A$	-	2.0	-	
Gate - Drain charge	Q_{gd}	$V_{GS} = 10V$	-	1.2	-	

Note:

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Fig.1 Gate-Charge Characteristics



Fig.2 Capacitance Characteristics

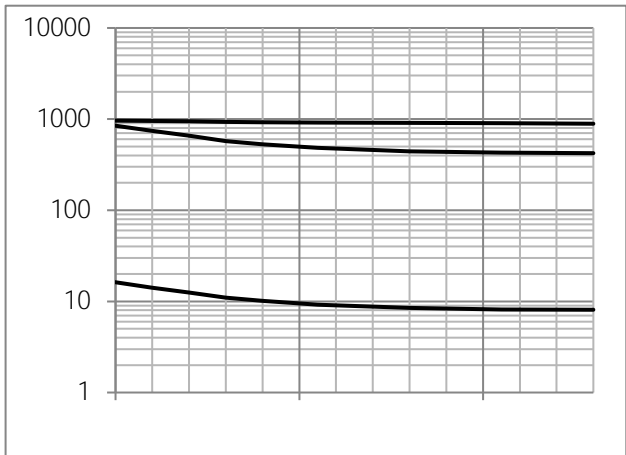


Fig.3 Power Dissipation

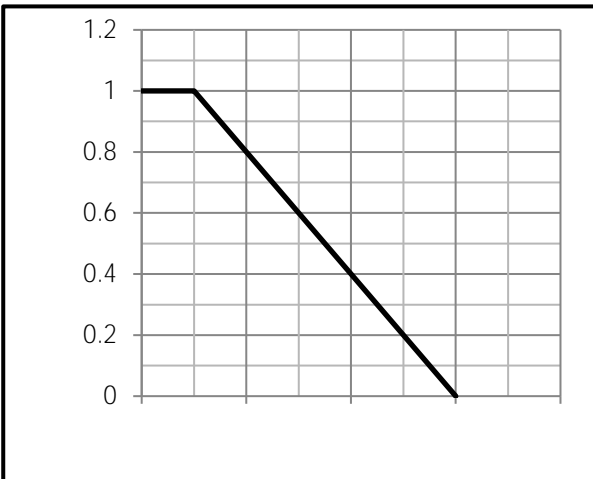


Fig.4 Typical output Characteristics

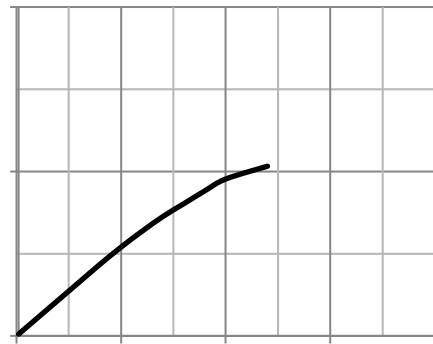


Fig.5 Threshold Voltage V.S Junction Temperature

Fig.6 Resistance V.S Drain Current

