● General Description

The ZM180P02S 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.

● Features

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●Ordering Information:

●Absolute Maximum Ratings T_C =25

Parameter	**Symbol**	Rating	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±8	V
Continuous Drain Current	$I_{D@}$TC=25	-7	A
	$I_{D@}$TC=75	-5.32	A
	$I_{D@}$TC=100	-4.41	A
Pulsed Drain Current	I_{DM}	-15	A
Total Power Dissipation	P_D@TC=25	3.4	W
Total Power Dissipation	P_D@TA=25	0.69	W
Operating Junction Temperature	T_J	-55 to 150	
Storage Temperature	T_{STG}	-55 to 150	

●Thermal resistance

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R_{thJC}	-	-	36	° C/W
Thermal resistance, junction - ambient	R_{thJA}	-	-	180	° C/W
Soldering temperature, wavesoldering for 10s	T_{sold}	-	-	265	° C

Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} =0V,I_D =250uA	-20			V
Gate Threshold Voltage	$V_{GS(TH)}$	V_{GS} =V_{DS}, I_D =-250uA	-0.3		-1	V
Drain-Source Leakage Current	I_{DSS}	V_{DS}=-20V, V_{GS} =0V			1.0	uA
Gate- Source Leakage Current	I_{GSS}	V_{GS}=±8V ,V_{DS} =0V			100	nA
Static Drain-source On Resistance		V_{GS}=-4.5V, I_D=-5A				
		V_{GS}=-2.5V, I_D=-4A				
		V_{GS}=-2.5V, I_D=-2A				
Forward Transconductance	g_{FS}	V_{DS} =-10V, I_D=-5A				

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●Dimensions(SOP8)

Unit: mm

SYMBOL	min	TYP	max	SYMBOL	min		max
A	4.80		5.25	C	1.30		1.75
A1	0.37		0.49	C1	0.55		0.75
A2		1.27		C2	0.55		0.65
A3		0.41		C3	0.05		0.20
B	5.80		6.20	C4	0.10	0.20	0.23
B1	3.80		4.10	D		1.05	
B2		5.00		D1	0.40		0.62