

General Description

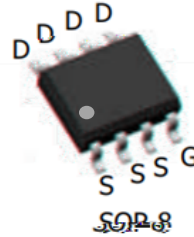
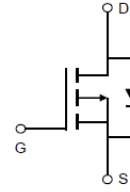
The ZM180P04S combines advanced trench MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$.

Features

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

Application

nd Synchronous Rectifier

Product Summary

Ordering Information:

Part NO.	ZM180P04S
Marking	ZM180P04
Packing Information	REEL TAPE
Basic ordering unit (pcs)	4000

Absolute Maximum Ratings $T_C = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-40	V
Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	$I_D @ T_C = 25$	-7	A
	$I_D @ T_C = 75$	-5.3	A
	$I_D @ T_C = 100$	-4.4	A
Pulsed Drain Current	I_{DM}	-22	A
Total Power Dissipation	$P_D @ T_C = 25$	3.4	W
Total Power Dissipation	$P_D @ T_A = 25$	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	$^{\circ}C/W$
Thermal resistance, junction - ambient	R_{thJA}	-	-	180	$^{\circ}C/W$
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}	$V_{GS}=0V, I_D=250\mu A$	-40			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}	$V_{DS}=-40V, V_{GS}=0V$			1.0	μA
Gate- Source Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$			100	nA
Static Drain-source On Resistance		$V_{GS}=-10V, I_D=-5A$				
		$V_{GS}=-4.5V, I_D=-4A$				
Forward Transconductance	g_{FS}	$V_{DS}=-10V, I_D=-5A$				
Source-drain voltage	V_{SD}	$I_S=-5A$				



Fig.1 Power Dissipation Derating Curve

Fig.

Fig.7 Switching Time Measurement Circuit

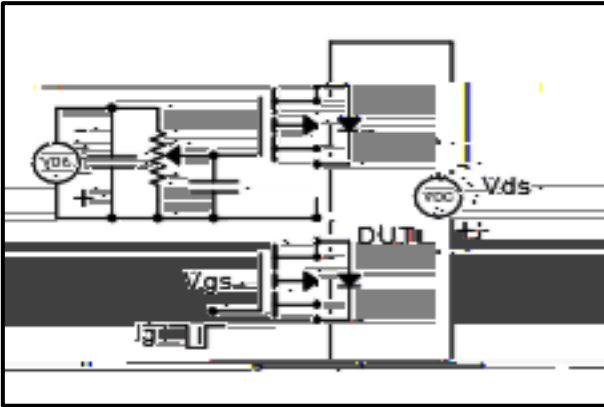


Fig.8 Gate Charge Waveform

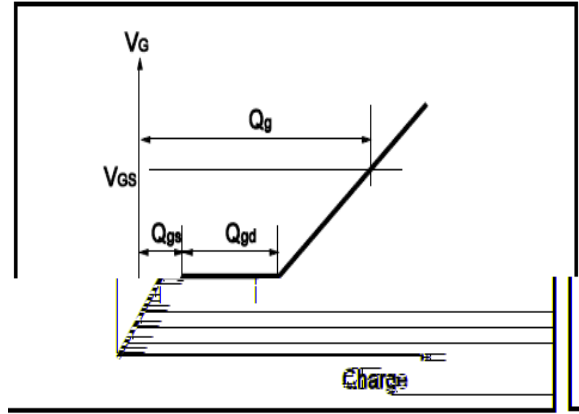


Fig.9 Switching Time Measurement Circuit

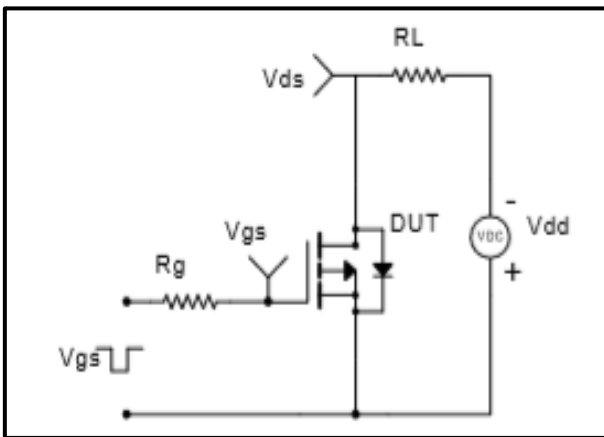


Fig.10 Gate Charge Waveform

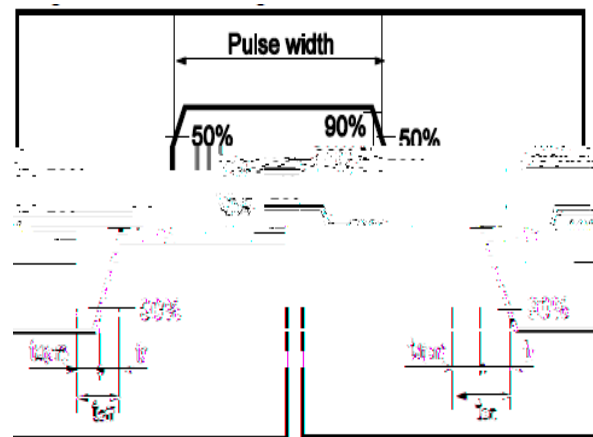


Fig.11 Avalanche Measurement Circuit

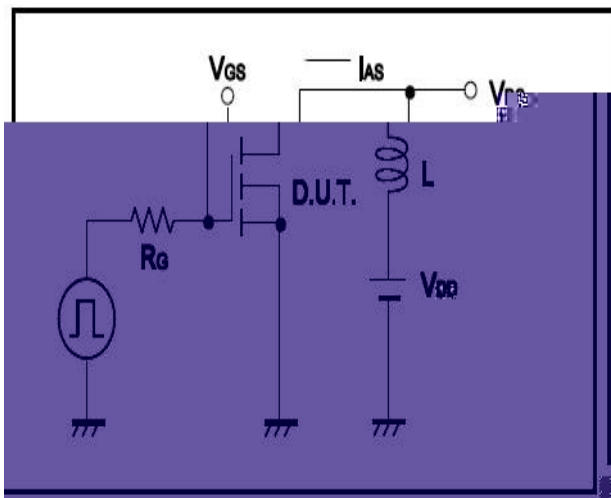


Fig.12 Avalanche Waveform

