



General Description

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

Product Summary

Features

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

Application

nd Synchronous Rectifier

Ordering Information:

Absolute Maximum Ratings $T_C = 25$

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	80	V
Gate-Source Voltage	V_{GS}	20	V
Continuous Drain Current	$I_{D@TC=25}$	80	A
	$I_{D@TC=75}$	60.8	A
	$I_{D@TC=100}$	50.4	A
Pulsed Drain Current	I_{DM}	190	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	

**Thermal resistance**

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}	$V_{GS}=0V, I_D=250\mu A$	80			V
Gate Threshold Voltage	$V_{GS(TH)}$	$V_{GS}=V_{DS}, I_D=250\mu A$	2		4	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		$V_{GS}=10V, I_D=20A$				
Forward Transconductance	g_{FS}	$V_{DS}=25V, I_D=8A$				
Source-drain voltage	V_{SD}	$I_S=20A$				

Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Input capacitance	C_{iss}	$f = 1MHz$	-	4400	-	pF
Output capacitance	C_{oss}		-	290	-	
Reverse transfer capacitance	C_{rss}		-	200	-	

Gate Charge characteristics($T_a=25$)

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Total gate charge	Q_g	$V_{DD} = 40V$	-	58	-	nC
Gate - Source charge	Q_{gs}	$I_D = 20A$	-	13	-	
Gate - Drain charge	Q_{gd}	$V_{GS} = 10V$	-	15	-	

Note:

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Fig.1 Gate-

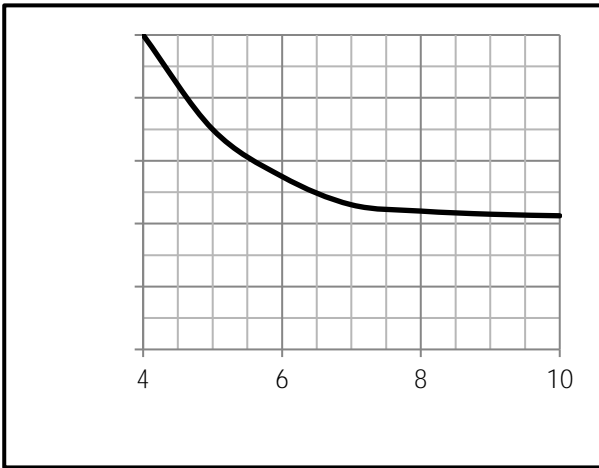


Fig.9 Switching Time Measurement Circuit

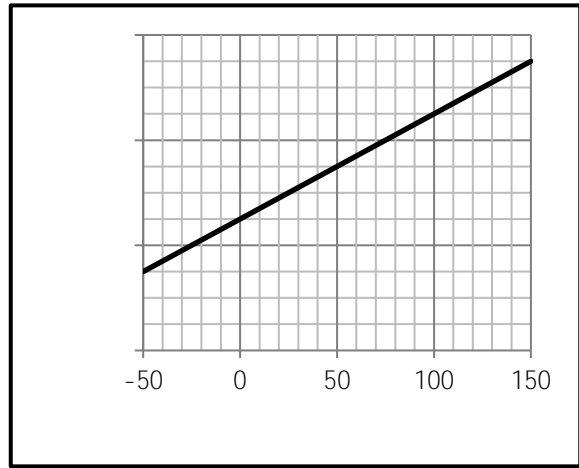


Fig.10 Gate Charge Waveform

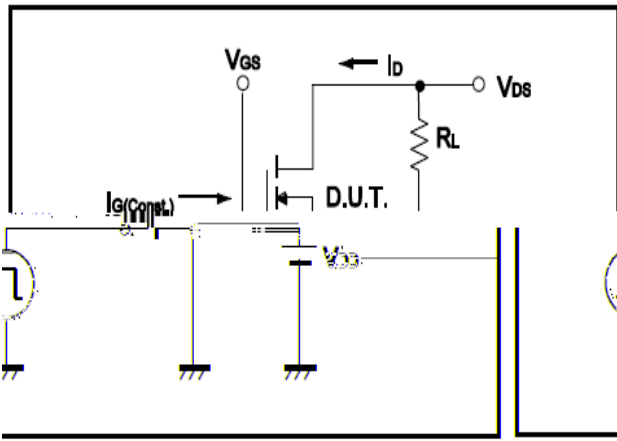


Fig.11 Switching Time Measurement Circuit

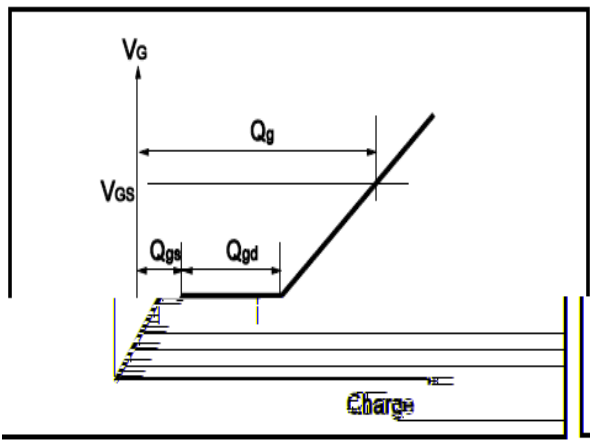


Fig.12 Gate Charge Waveform

