Product Summary

It combines advanced trench MOSFET technology with a low resistance package to provide extremely low $R_{DS(ON)}$. It combines one N Channel MOSFET and one P channel MOSFET.

Trench technology

$_{DS(ON)}$ to minimize conductive loss

Dual DIE in one package

Power Management in Notebook Computer

BLDC Motor driver

N Channel Absolute Maximum Ratings T_C =25

Parameter	**Symbol**	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	20	V
Continuous Drain Current	I_D@T_C =25	21	A
	I_D@T_C =75	16	A
	I_D@T_C=100	13	A
Pulsed Drain Current	I_{DM}	63	A
Total Power Dissipation	P_D@T_C=25	50	W
Total Power Dissipation	P_D@T_A=25	2.0	W
Operating Junction Temperature	T_J	-55 to 150	
Storage Temperature	T_{STG}	-55 to 150	
Single Pulse Avalanche Energy	E_{AS}	30	mJ

P Channel Absolute Maximum Ratings T_C =25

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-60	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D@T_C =25	-18	A
	I_D@T_C =75	-13.6	A
	I_D@T_C=100	-11	A
Pulsed Drain Current	I_{DM}	-54	A
Total Power Dissipation	P_D@T_C=25	50	W
Total Power Dissipation	P_D@T_A=25	2.0	W
Operating Junction Temperature	T_J	-55 to 150	
Storage Temperature	T_{STG}	-55 to 150	
Single Pulse Avalanche Energy	E_{AS}	35	mJ

Thermal resistance

Parameter	Symbol	Min.	Typ.	Max.	Unit
Thermal resistance, junction - case	R_{thJC}	-	-	2.3	° C/W
Thermal resistance, junction - ambient	R_{thJA}	-	-	62	° C/W
Soldering temperature, wavesoldering for 10s	T_{sold}	-	-	265	° C

N Channel Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} =0V, I_D =250uA	60			V
Gate Threshold Voltage	$V_{GS(TH)}$	V_{GS} =V_{DS}, I_D =250uA	1.2	1.8	2.5	V
Drain-Source Leakage Current	I_{DSS}	V_{DS}=60V, V_{GS} =0V			1.0	uA
Gate- Source Leakage Current	I_{GSS}	V_{GS}=±20V, V_{DS} =0V			100	nA
Static Drain-source On Resistance		V_{GS}=10V, I_D=8A				
		V_{GS}=4.5V, I_D=6A				
Forward Transconductance	g_{FS}	V_{DS} =25V, I_D=5A				
Source-drain voltage	V_{SD}	Is=12A				

N Channel Dynamic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit

Gate Risistance	Rg	f = 1MHz		1.5		
Input capacitance	Ciss	f = 1MHz V_{DS}=25V	-	1430	-	pF
Output capacitance	Coss		-	160	-	
Reverse transfer capacitance	Crss		-	115	-	
Total gate charge	Qg	V_{DD} = 25V I_D = 5A V_{GS} = 10V	-	17	-	nC
Gate - Source charge	Qgs		-	4.1	-	
Gate - Drain charge	Qgd		-	2.5	-	

P Channel Electronic Characteristics

Parameter	Symbol	Condition	Min.	Typ	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS} G261.77 522.19 1				

Fig.5 Avalanche Measurement Circuit

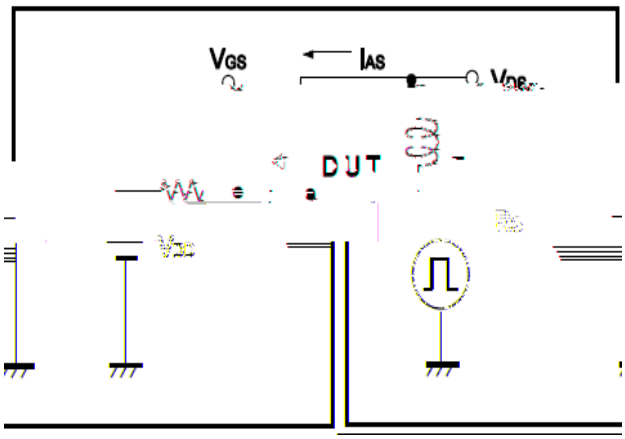
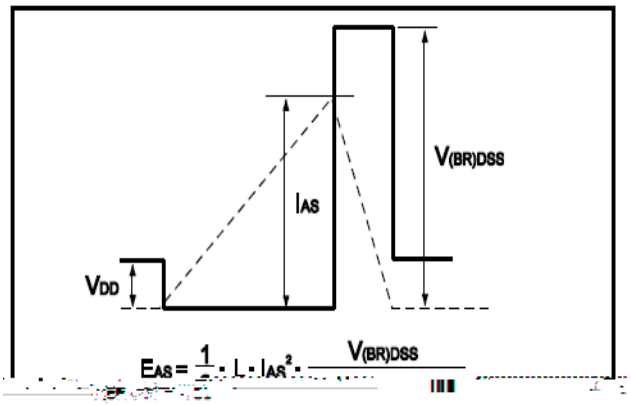


Fig.6 Avalanche Waveform



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Unit: mm