

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
 $R_{DS(ON)}$ 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	$^{\circ}C/W$
Thermal resistance, junction - ambient	R_{thJA}	-	-	62	$^{\circ}C/W$
Soldering temperature, wavesoldering for 10s	T_{sold}	-	-	265	$^{\circ}C$

N Channel Electronic Characteristics

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

N Channel Dynamic Characteristics

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
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Gate Resistance	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

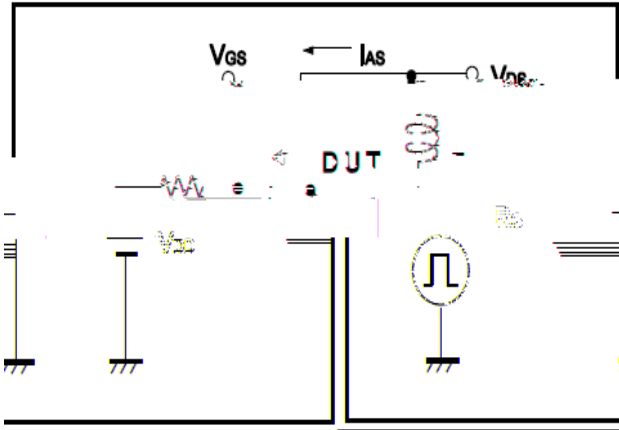
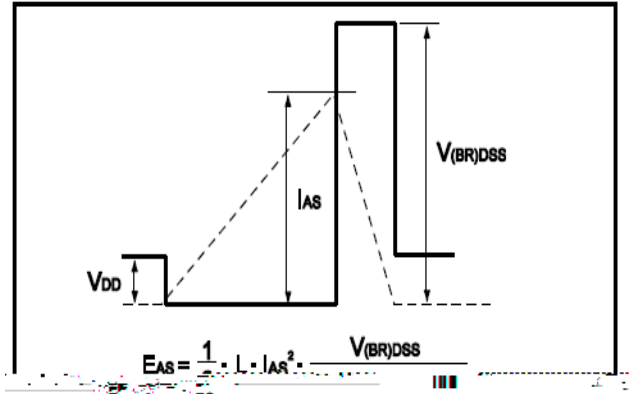


Fig.6 Avalanche Waveform





(TO-252-4)

Unit: mm

