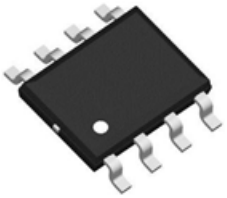
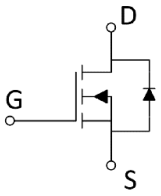
30V_{DS}/±20V N-Channel Enhancement Mode MOSFET

Features

- V_{DS}=30V,I_D=20A
- $R_{DS(ON)}$=3.1mΩ（TYP.）V_{GS}=10V
- Reliable and Rugged
- Avalanche Rated
- Low On-Resistance

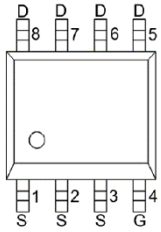
SOP8





Applications

- Load Switch
- Power management in portable/desktop PCs
- DC/DC conversion



Ordering Information

Device	Package		Marking	Package Qty.
HMN4350	SOP8	Pb-Free	N4350	3000pcs/Reel

Absolute Maximum Ratings (T$_C$=25℃,unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	20	A
Pulesd Drain Current	I_{DM}	75	A
Single Pulsed Avalanche Energy	E_{AS}	-	mJ
Maximum Power Dissipation	P_D	2.1	W
Operating,Storage Temperature Range	T_J,T_{STG}	-55~150	℃
Thermal Resistance,Junction-to-Case	$R_{\theta JA}$	89	℃/ W

Electrical Characteristics

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V,I_D=250μA	30	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V, V_{GS}=0V	-	-	1	μA
Gate -Source Leakage Current	I_{GSS}	V_{GS}=±20V, V_{DS}=0V	-	-	±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS},I_D=250μA	1.0	1.4	2.5	V
Drain-Source On-stage Resistance	$R_{DS(ON)}$	V_{GS}=10V,I_D=1A	-	-	4.2	mΩ
		V_{GS}=4.5V,I_D=2A	-	-	7.3	

Dynamic Characteristics

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Input capacitance	C_{iss}	V_{DS}=15V	-	2412	-	pF
Output capacitance	C_{oss}	V_{GS}=0V	-	420	-	
Reverse transfer capacitance	C_{rss}	f=1MHz	-	396	-	
Gate Resistance	R_g	f=1MHz	-	-	-	Ω
Total Gate Charge	Q_g	V_{DS}=15V	-	54	-	nC
Gate Source Charge	Q_{gs}	V_{GS}=10V	-	4.1	-	
Gate Drain Charge	Q_{gd}	I_D=20A	-	19	-	
Turn-on delay Time	$t_{d(on)}$	V_{GS}=10V	-	19	-	ns
Rise time	t_r	V_{DS}=15V	-	44	-	
Turn-off delay Time	$t_{d(off)}$	R_L=3.5Ω	-	58	-	
Fall time	t_f	R_G=6.8Ω	-	16.7	-	

Reverse Diode Characteristics

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Body Diode Forward Voltage	V_{SD}	V_{GS}=0V,I_{SD}=1A	-	-	1.2	V

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