

N-Channel Enhancement Mode MOSFET

1. Product Information

1.1 Features

- Low C_{rss}
- Low gate charge

1.2 Applications

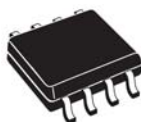
- Portable appliances
- Low power DC to DC Converter

1.3 Quick reference

- $BV \geq 650\text{ V}$
- $R_{DS(ON)} \leq 8\ \Omega @ V_{GS} = 10\text{ V}$
- $P_{tot} \leq 2\text{ W}$
- $I_D \leq 0.4\text{ A}$

2. Pin Description

Pin	Description	Simplified Outline	Symbol
1	Gate	<p>Top View SOP- 8L</p>	
2,3,4,	Source		
5,6,7,8	Drain		



3. Limiting Values

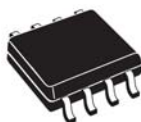
Symbol	Parameter	Conditions	Min	Max	Unit
V_{DS}	Drain-Source Voltage	$T_C = 25\text{ }^\circ\text{C}$	-	650	V
V_{GS}	Gate-Source Voltage	$T_C = 25\text{ }^\circ\text{C}$	-	± 30	V
I_D	Drain Current (DC)	$T_C = 25\text{ }^\circ\text{C}, V_{GS} = 10\text{ V}$	-	0.4	A
		$T_C = 100\text{ }^\circ\text{C}, V_{GS} = 10\text{ V}$	-	0.26	A
I_{DM}^*	Drain Current (Pulsed) *	$T_C = 25\text{ }^\circ\text{C}, V_{GS} = 10\text{ V}$	-	1.6	A
P_{tot}	Drain power dissipation	$T_C = 25\text{ }^\circ\text{C}$	-	2	W
I_{AS}	Avalanche current (Single)	$L = 300\text{ }\mu\text{H}, I_{AS} = 0.34\text{ A},$ $V_{DD} = 50\text{ V}, R_G = 25\text{ }\Omega$	-	0.4	A
E_{AS}	Single pulsed avalanche energy		-	24	μJ
T_{stg}	Storage Temperature		- 55	150	$^\circ\text{C}$
T_J	Junction Temperature		-	150	$^\circ\text{C}$
I_S	Continuous-Source Current	$T_C = 25\text{ }^\circ\text{C}$	-	0.4	A
I_{SM}	Pulsed-Source current		-	1.6	
$R_{\theta JA}$	Thermal Resistance- Junction to Ambient		-	62.5	$^\circ\text{C} / \text{W}$

Notes :

* Pulse width $\leq 300\text{ }\mu\text{s}$, duty cycle $\leq 2\%$

4. Marking Information

Product Name	Marking
iH0265S	<div style="background-color: black; color: white; padding: 2px; display: inline-block;"> iH0265S XXXXX </div> X : Date Code



5. Electrical Characteristics (T_A=25 °C Unless Otherwise Noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
Static Characteristics						
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0 V, I _{DS} = 250 μA	650	-	-	V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS} , I _{DS} = 250 μA	2.0	-	4.0	V
I _{DSS}	Drain Leakage Current	V _{DS} = 650 V, V _{GS} = 0 V	-	-	1	μA
I _{GSS}	Gate Leakage Current	V _{GS} = 0 V, V _{GS} = ± 30 V	-	-	± 100	nA
R _{DS(ON)} ^a	On-State Resistance	V _{GS} = 10 V, I _{DS} = 0.4 A	-	6.5	8	Ω
g _{fs}	Forward transfer conductance	V _{GS} = 10 V, I _{DS} = 0.4 A	-	0.95	-	S
Diode Characteristics						
V _{SD} ^a	Diode Forward Voltage	I _{SD} = 0.4A, V _{GS} = 0 V	-	-	1.4	V
t _{rr}	Reverse Recovery Time	I _{SD} = 0.4A, V _{GS} = 0 V dI _{SD} /dt = 100 A/μs	-	-	-	ns
Q _{rr}	Reverse Recovery Charge		-	-	-	uC
Dynamic Characteristics^b						
C _{iss}	Input Capacitance	V _{GS} = 0 V, V _{DS} = 25 V Frequency = 1 MHz	-	-	-	pF
C _{oss}	Output Capacitance		-	-	-	
C _{riss}	Reverse Transfer Capacitance		-	-	-	
t _{d(on)}	Turn-on Delay Time	V _{DD} = 300 V, V _{GS} = 10 V I _D = 0.34 A, R _G = 25 Ω	-	-	-	ns
t _r	Turn-on Rise Time		-	-	-	
t _{d(off)}	Turn-off Delay Time		-	-	-	
t _f	Turn-off Fall Time		-	-	-	
Gate Charge Characteristics						
Q _g	Total Gate Charge	V _{DS} = 300 V, V _{GS} = 10 V, I _D = 0.34 A	-	-	-	nC
Q _{gs}	Gate-Source Charge		-	-	-	
Q _{gd}	Gate-Drain Charge		-	-	-	

Notes :

a : Pulse test ; pulse width ≤ 300 μs, duty cycle ≤ 2 %

b : Guaranteed by design, not subject to production testing