MCH6337

Power MOSFET –20V, 49mΩ, –4.5A, Single P-Channel



www.onsemi.com

Features

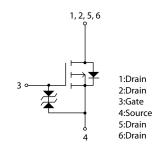
- Low On-Resistance
- High Speed Switching
- Low Gate Drive Voltage
- ESD Diode-Protected Gate
- Pb-Free and RoHS Compliance
- Halogen Free Compliance : MCH6337-TL-H, MCH6337-TL-W

Specifications

Absolute Maximum Ratings at Ta = 25°C

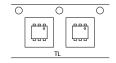
Parameter	Symbol	Value	Unit
Drain to Source Voltage	VDSS	-20	V
Gate to Source Voltage	VGSS	±10	V
Drain Current (DC)	ID	-4.5	Α
Drain Current (Pulse) PW≤10μs, duty cycle≤1%	I _{DP}	-18	А
Power Dissipation When mounted on ceramic substrate (1200mm²×0.8mm)	PD	1.5	W
Junction Temperature	Tj	150	°C
Storage Temperature	Tstg	-55 to +150	°C

Electrical Connection P-Channel



Packing Type:TL

Marking





Thermal Resistance Ratings

Parameter	Symbol	Value	Unit
Junction to Ambient			
When mounted on ceramic substrate	$R_{\theta JA}$	83.3	°C/W
(1200mm ² ×0.8mm)			

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

ORDERING INFORMATION

See detailed ordering and shipping information on page 5 of this data sheet.

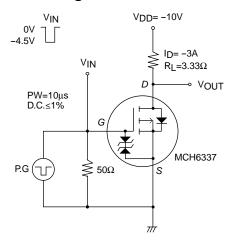
MCH6337

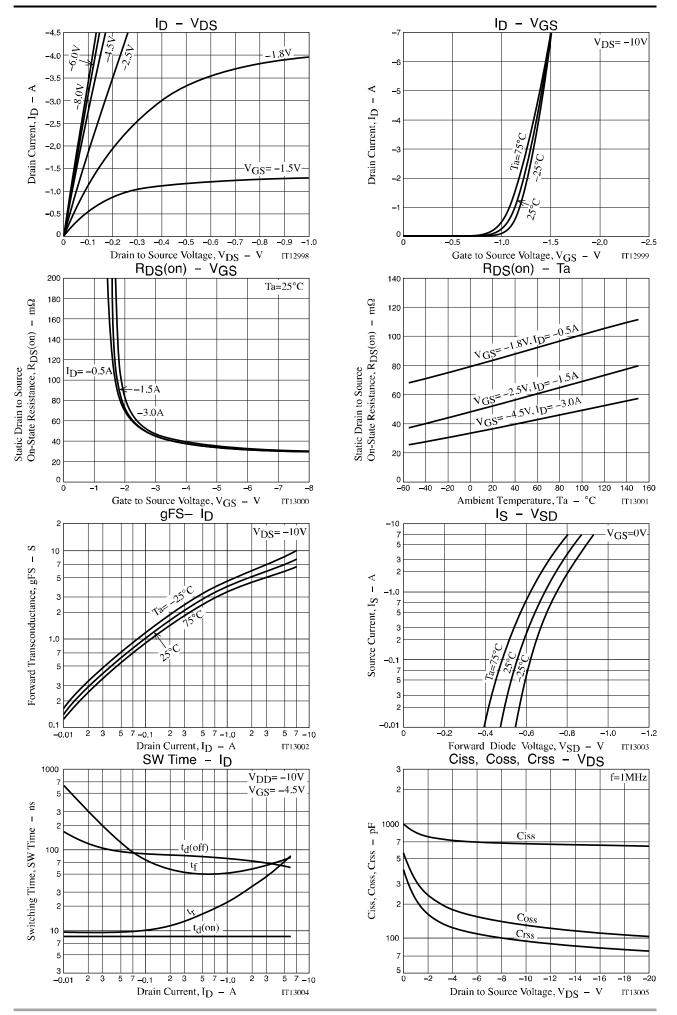
Electrical Characteristics at Ta = 25°C

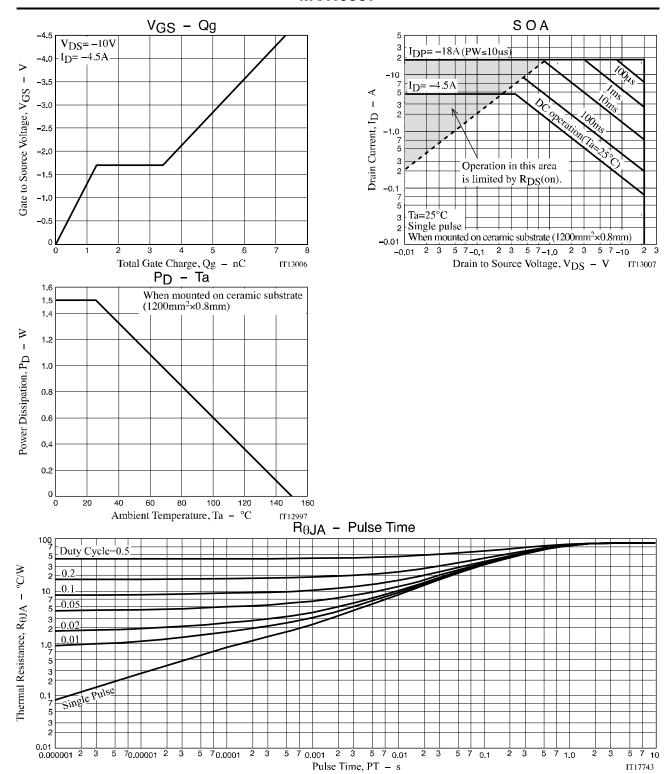
Parameter	Cumbal	Conditions	Value			Unit
Parameter	Symbol		min	typ	max	Unit
Drain to Source Breakdown Voltage	V(BR)DSS	I _D =-1mA, V _{GS} =0V	-20			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =-20V, V _{GS} =0V			-1	μΑ
Gate to Source Leakage Current	IGSS	V _{GS} =±8V, V _{DS} =0V			±10	μΑ
Gate Threshold Voltage	V _{GS} (th)	V _{DS} =-10V, I _D =-1mA	-0.4		-1.3	V
Forward Transconductance	9FS	V _{DS} =-10V, I _D =-3A	3.5	5.9		S
Static Drain to Source On-State Resistance	R _{DS} (on)1	I _D =-3A, V _G S=-4.5V		37	49	mΩ
	R _{DS} (on)2	I _D =-1.5A, V _{GS} =-2.5V		53	75	mΩ
	R _{DS} (on)3	I _D =-0.5A, V _G S=-1.8V		85	130	mΩ
Input Capacitance	Ciss			670		pF
Output Capacitance	Coss	V _{DS} =-10V, f=1MHz		130		pF
Reverse Transfer Capacitance	Crss			94		pF
Turn-ON Delay Time	t _d (on)			8.4		ns
Rise Time	t _r			45		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit		69		ns
Fall Time	tf			63		ns
Total Gate Charge	Qg	V _{DS} =-10V, V _{GS} =-4.5V, I _D =-4.5A		7.3		nC
Gate to Source Charge	Qgs			1.3		nC
Gate to Drain "Miller" Charge	Qgd	7		2.1		nC
Forward Diode Voltage	V _{SD}	I _S =-4.5A, V _{GS} =0V		-0.82	-1.2	V

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

Switching Time Test Circuit







Package Dimensions

MCH6337-TL-E/ MCH6337-TL-H/ MCH6337-TL-W

MCPH6

CASE 419AS ISSUE O

Unit: mm

1: Drain

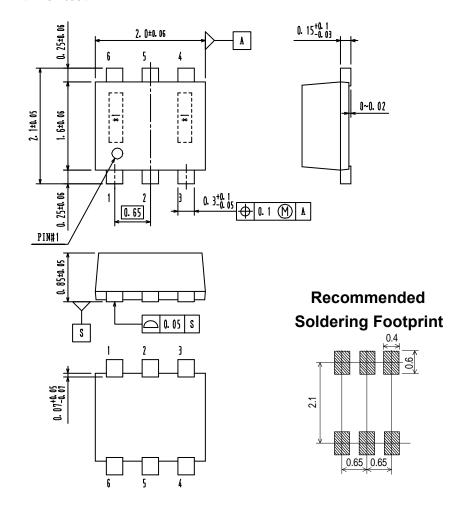
2: Drain

3: Gate

4 : Source

5: Drain

6: Drain



ORDERING INFORMATION

Device	Package	Shipping	Note
MCH6337-TL-E			Pb-Free
MCH6337-TL-H	MCPH6 SC-88,SC-70-6,SOT-363	3,000 pcs. / reel	Pb-Free
MCH6337-TL-W			and Halogen Free

Note on usage: Since the MCH6337 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

ON Semiconductor and the ON logo are registered trademarks of Semiconductor Components Industries, LLC (SCILLC) or its subsidiaries in the United States and/or other countries. SCILLC owns the rights to a number of patents, trademarks, copyrights, trade secrets, and other intellectual property. A listing of SCILLC's product/patent coverage may be accessed at www.onsemi.com/site/pdf/Patent-Marking.pdf. SCILLC reserves the right to make changes without further notice to any products herein. SCILLC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does SCILLC assume any liability arising out of the application or use of any product or circuit, and specifically disclaims any and all liability, including without limitation special, consequential or incidental damages. "Typical" parameters which may be provided in SCILLC data sheets and/or specifications can and do vary in different applications and actual performance may vary over time. All operating parameters, including "Typicals" must be validated for each customer application by customer's technical experts. SCILLC does not convey any license under its patent rights nor the rights of others. SCILLC products are not designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the SCILLC product could create a situation where personal injury or death may occur. Should Buyer purchase or use SCILLC products for any such unintended or unauthorized application, Buyer shall indemnify and hold SCILLC and its officers, employees, subsidiaries, affiliates, and distributors harmless against all claims, costs, damages, and expenses, and reasonable attorney fees arising out of, directly or indirectly, any claim of personal injury or death associated with such unintended or unauthorized use, even if such claim alleges that SCILLC was negligent re

AMEYA360 Components Supply Platform

Authorized Distribution Brand:

























Website:

Welcome to visit www.ameya360.com

Contact Us:

Address:

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd Minhang District, Shanghai , China

Sales:

Direct +86 (21) 6401-6692

Email amall@ameya360.com

QQ 800077892

Skype ameyasales1 ameyasales2

Customer Service :

Email service@ameya360.com

Partnership :

Tel +86 (21) 64016692-8333

Email mkt@ameya360.com