

MCH5839

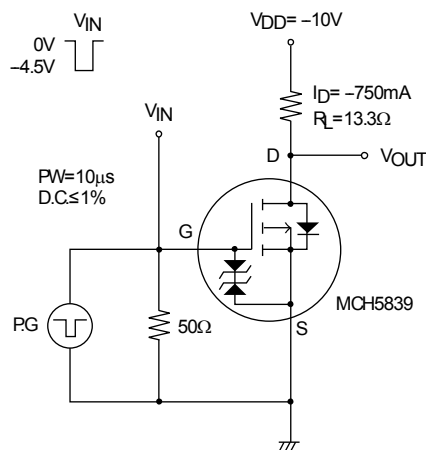
ELECTRICAL CHARACTERISTICS at Ta = 25°C (Note 2)

Parameter	Symbol	Conditions	Value			Unit
			min	typ	max	
[MOSFET]						
Drain to Source Breakdown Voltage	V(BR)DSS	ID=−1mA, VGS=0V	−20			V
Zero-Gate Voltage Drain Current	IDSS	VDS=−20V, VGS=0V			−1	μA
Gate to Source Leakage Current	IGSS	VGS=±8V, VDS=0V			±10	μA
Gate Threshold Voltage	VGS(th)	VDS=−10V, ID=−1mA	−0.4		−1.4	V
Forward Transconductance	gFS	VDS=−10V, ID=−750mA		1.9		S
Static Drain to Source On-State Resistance	RDS(on)1	ID=−750mA, VGS=−4.5V		205	266	mΩ
	RDS(on)2	ID=−300mA, VGS=−2.5V		295	413	mΩ
	RDS(on)3	ID=−100mA, VGS=−1.8V		430	645	mΩ
Input Capacitance	Ciss	VDS=−10V, f=1MHz		120		pF
Output Capacitance	Coss			26		pF
Reverse Transfer Capacitance	Crss			20		pF
Turn-ON Delay Time	td(on)	See specified Test Circuit		5.3		ns
Rise Time	tr			9.7		ns
Turn-OFF Delay Time	td(off)			16		ns
Fall Time	tf			14		ns
Total Gate Charge	Qg	VDS=−10V, VGS=−4.5V, ID=−1.5A		1.7		nC
Gate to Source Charge	Qgs			0.28		nC
Gate to Drain “Miller” Charge	Qgd			0.47		nC
Forward Diode Voltage	VSD	IS=−1.5A, VGS=0V		−0.89	−1.2	V
[SBD]						
Reverse Voltage	VR	IR=0.5mA	15			V
Forward Voltage	VF	IF=0.5A		0.4	0.46	V
Reverse Current	IR	VR=6V			90	μA
Interterminal Capacitance	C	VR=10V, f=1MHz		13		pF
Reverse Recovery Time	trr	IF=IR=100mA, See specified Test Circuit			10	ns

Note 2 : 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.

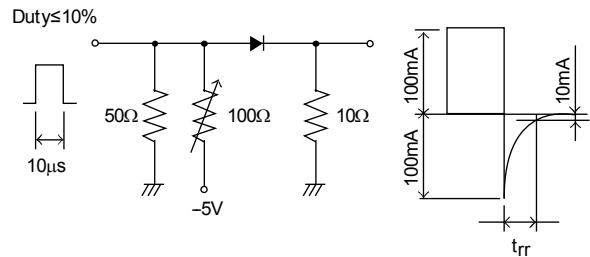
Switching Time Test Circuit

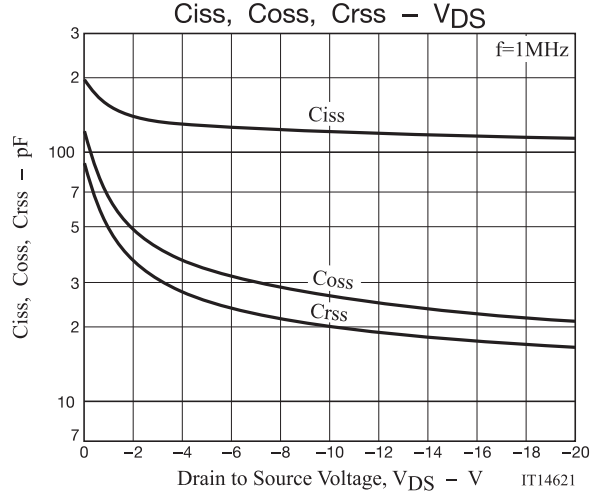
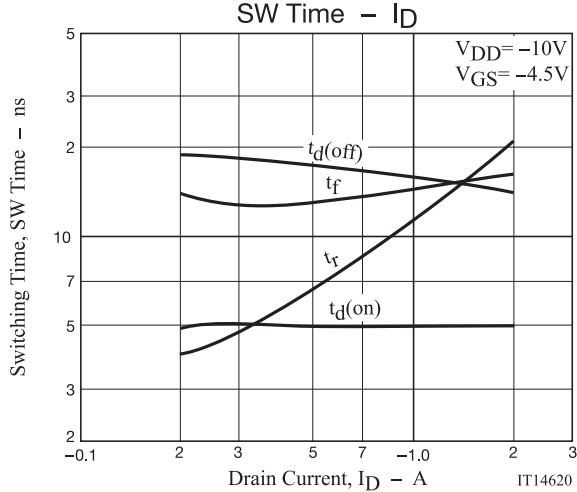
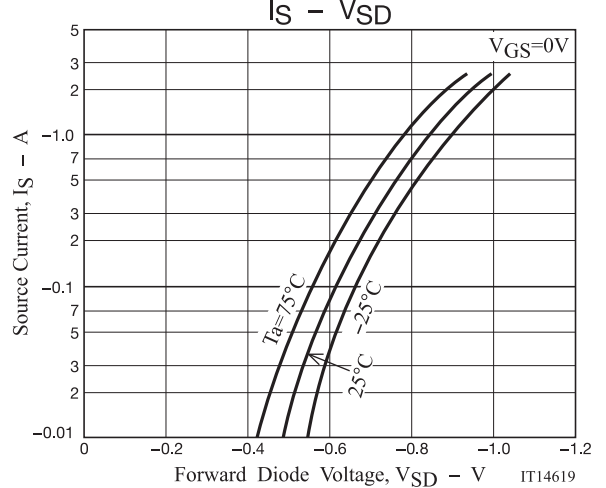
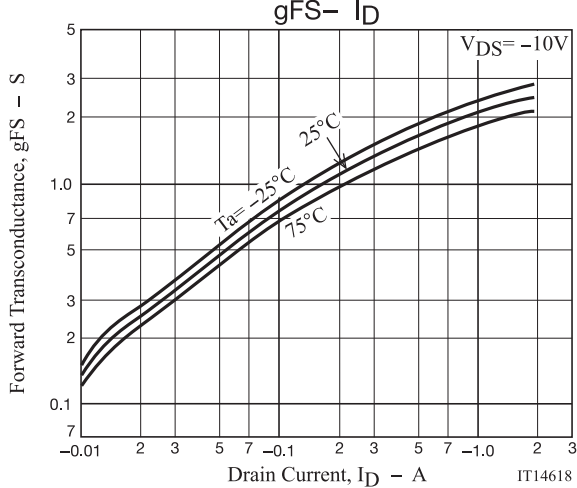
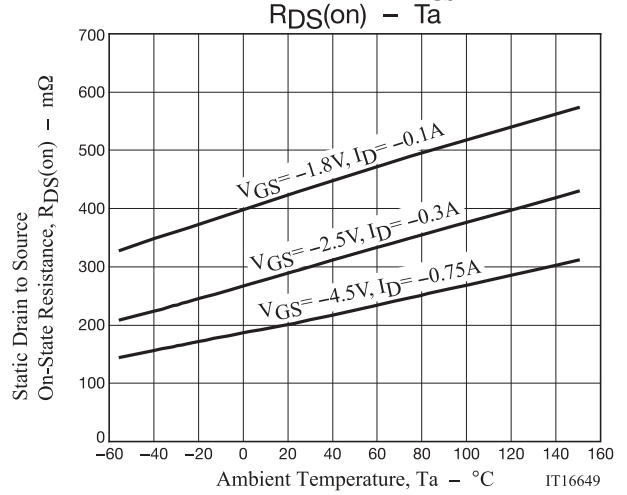
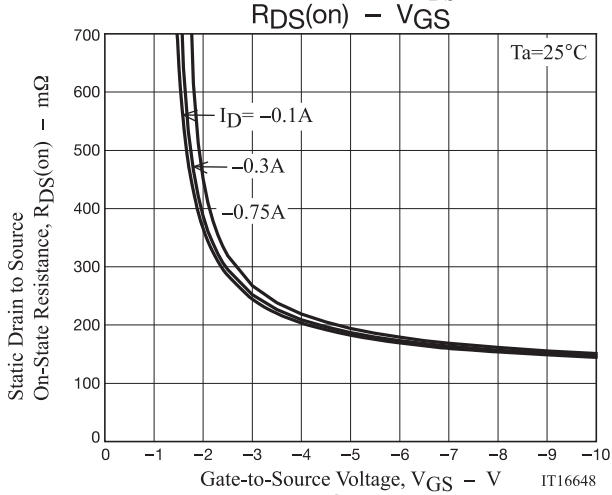
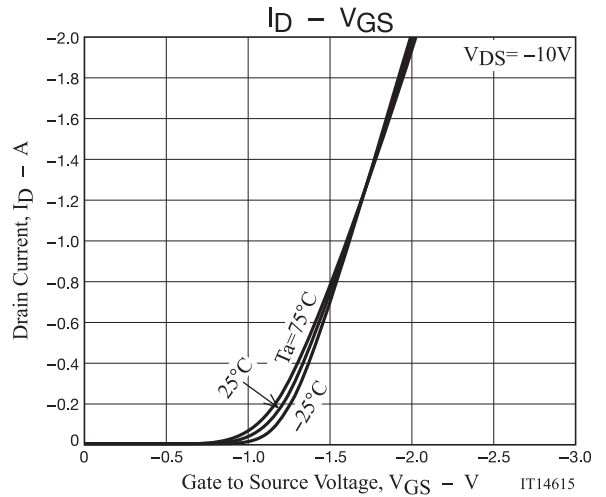
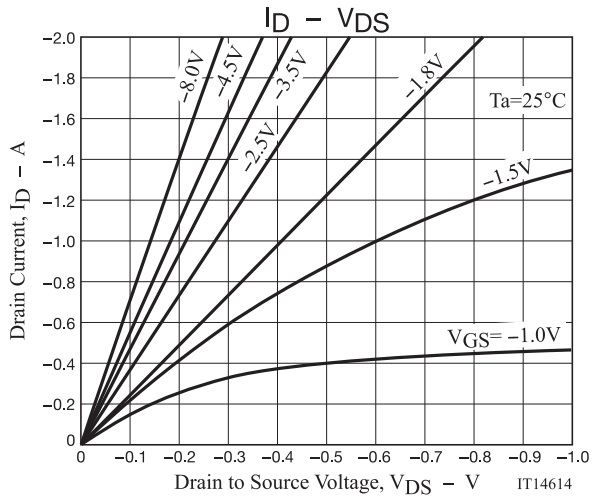
(MOSFET)

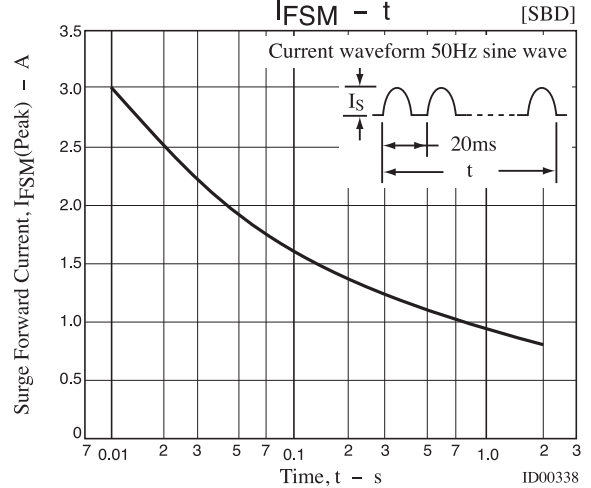
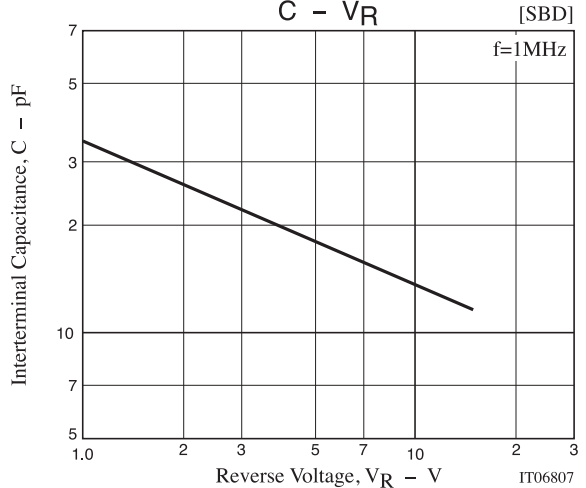
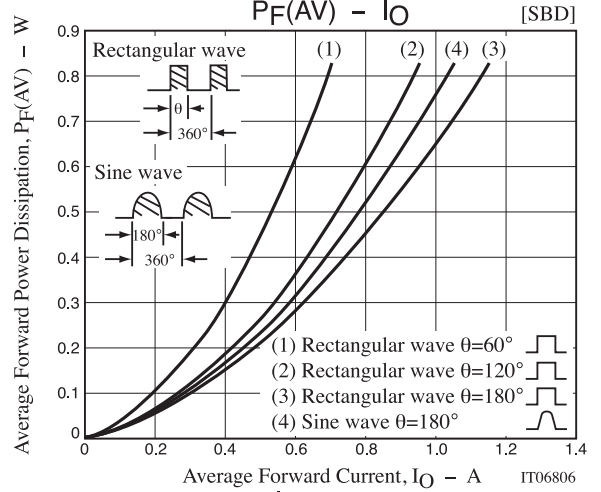
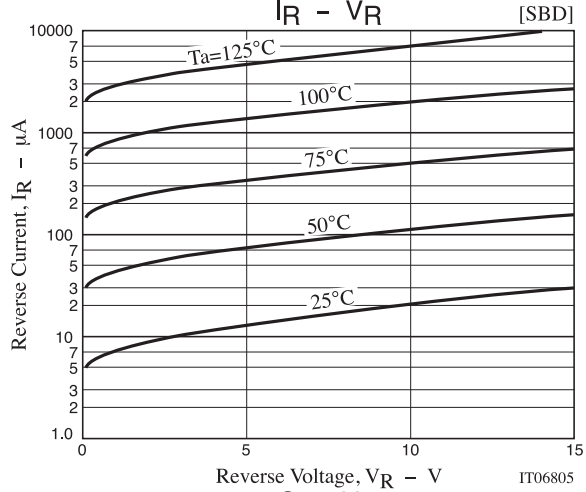
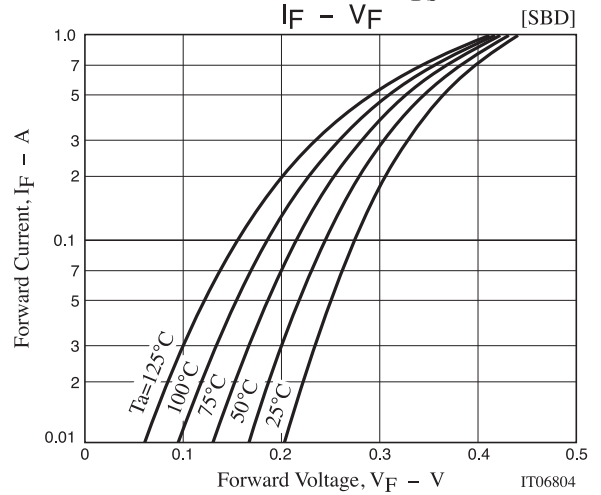
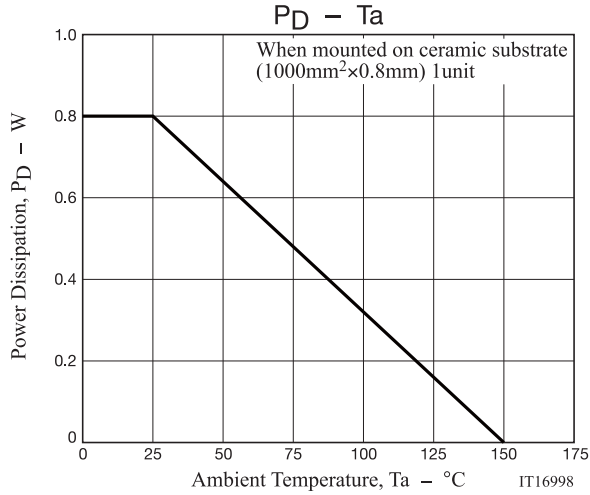
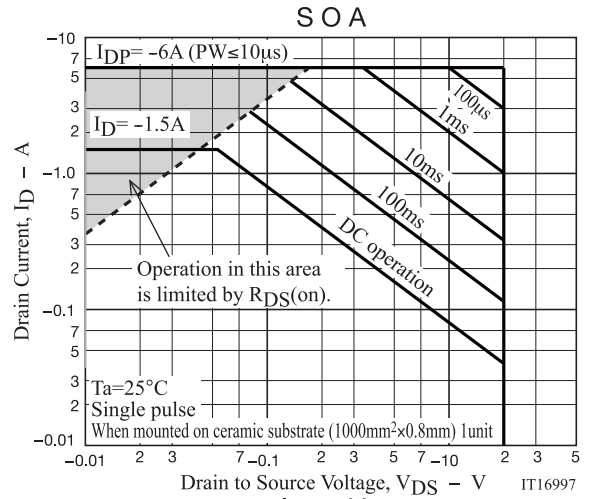
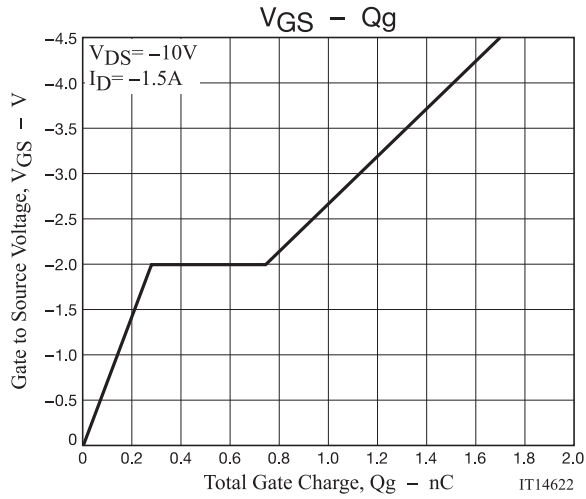


t_{rr} Test Circuit

(SBD)

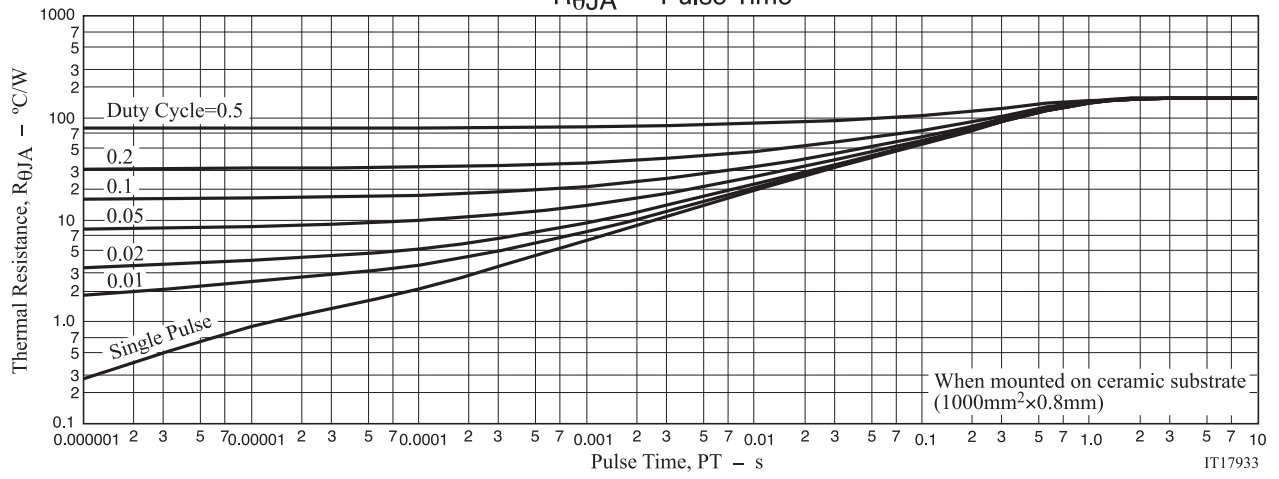






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$R_{\theta JA}$ - Pulse Time

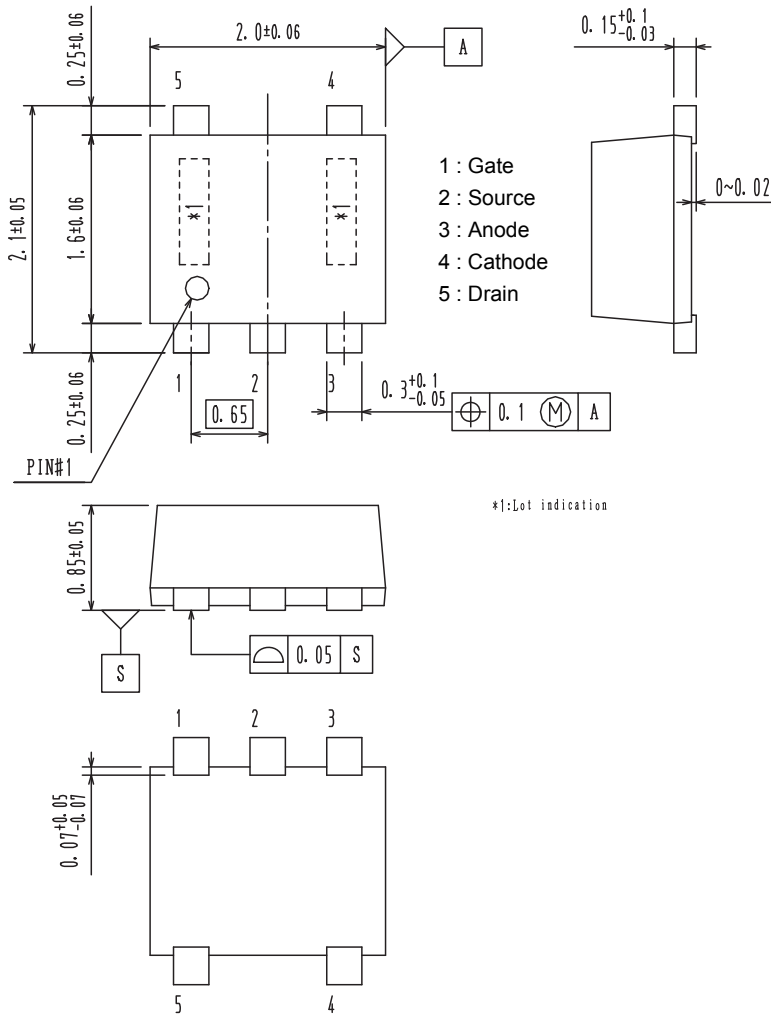


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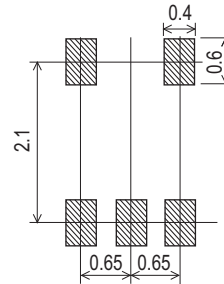
PACKAGE DIMENSIONS

unit : mm

SC-88AFL / MCPH5
CASE 419AP
ISSUE O



Recommended Soldering Footprint



ORDERING INFORMATION

Device	Marking	Package	Shipping (Qty / Packing)
MCH5839-TL-H	YD	SC-88AFL / MCPH5 (Pb-Free / Halogen Free)	3,000 / Tape & Reel
MCH5839-TL-W			

† For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D. http://www.onsemi.com/pub_link/Collateral/BRD8011-D.PDF

Note on usage : Since the MCH5839 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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