



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

MCH6336 — P-Channel Silicon MOSFET General-Purpose Switching Device Applications

Features

- Ultrahigh-speed switching.
- 1.8V drive

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		-12	V
Gate-to-Source Voltage	V _{GSS}		±10	V
Drain Current (DC)	I _D		-5	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	-20	A
Allowable Power Dissipation	P _D	When mounted on ceramic substrate (1200mm ² ×0.8mm)	1.5	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V _{(BR)DSS}	I _D =-1mA, V _{GS} =0V	-12			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-12V, V _{GS} =0V			-10	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±8V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-6V, I _D =-1mA	-0.4		-1.4	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-6V, I _D =-3A	4.8	8.1		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-3A, V _{GS} =-4.5V		33	43	mΩ
	R _{DS(on)2}	I _D =-1.5A, V _{GS} =-2.5V		47	66	mΩ
	R _{DS(on)3}	I _D =-0.5A, V _{GS} =-1.8V		68	98	mΩ

Marking : YK

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MCH6336

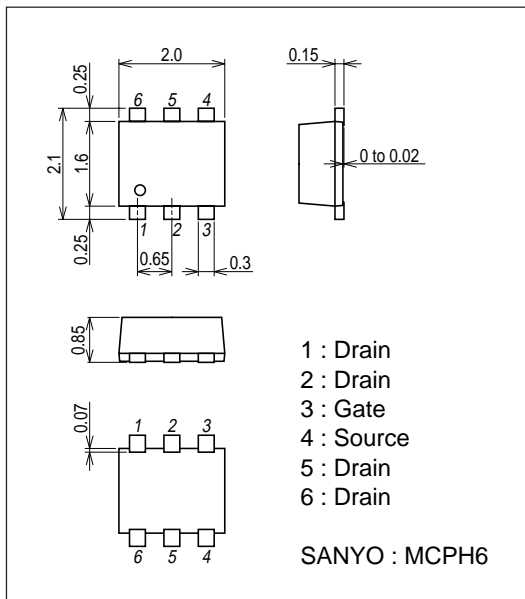
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	C_{iss}	$V_{DS}=-6V, f=1MHz$		660		pF
Output Capacitance	C_{oss}	$V_{DS}=-6V, f=1MHz$		210		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS}=-6V, f=1MHz$		155		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		7.4		ns
Rise Time	t_r	See specified Test Circuit.		57		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		72		ns
Fall Time	t_f	See specified Test Circuit.		69		ns
Total Gate Charge	Q_g	$V_{DS}=-6V, V_{GS}=-4.5V, I_D=-5A$		6.9		nC
Gate-to-Source Charge	Q_{gs}	$V_{DS}=-6V, V_{GS}=-4.5V, I_D=-5A$		1.2		nC
Gate-to-Drain "Miller" Charge	Q_{gd}	$V_{DS}=-6V, V_{GS}=-4.5V, I_D=-5A$		1.8		nC
Diode Forward Voltage	V_{SD}	$I_S=-5A, V_{GS}=0V$		-0.83	-1.2	V

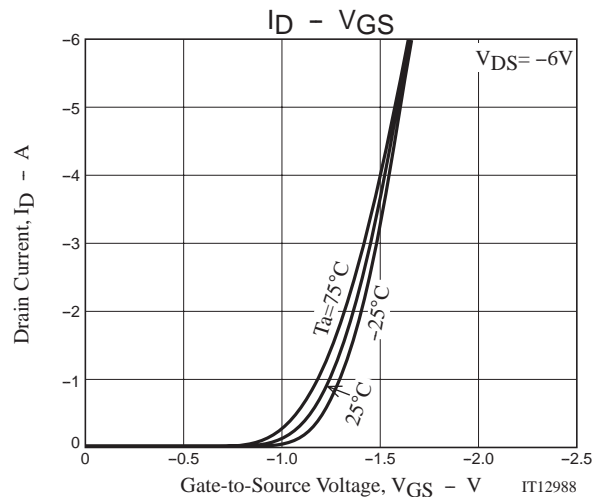
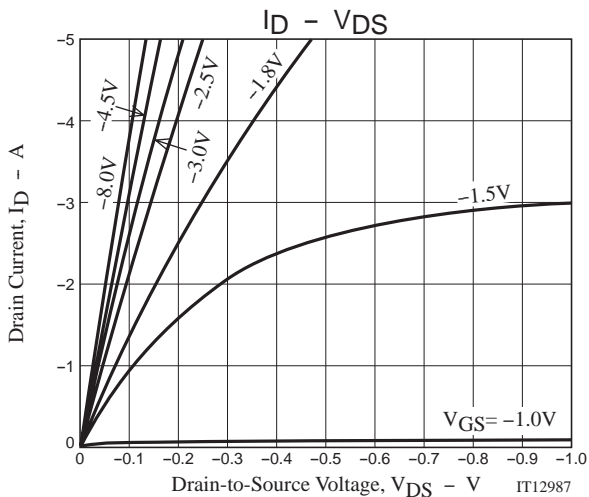
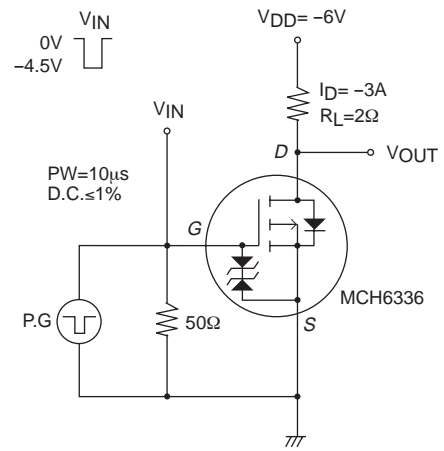
Package Dimensions

unit : mm (typ)

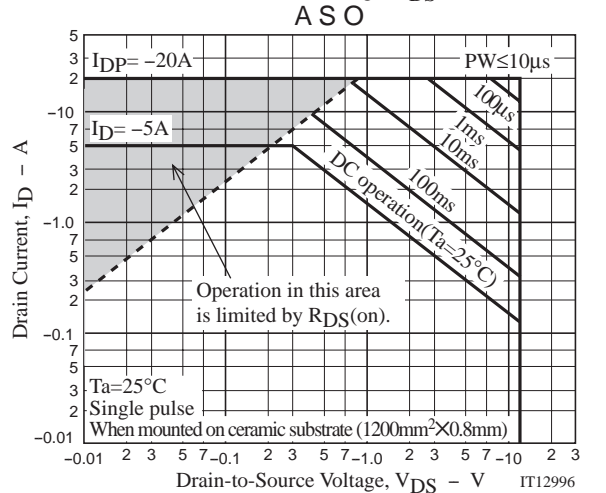
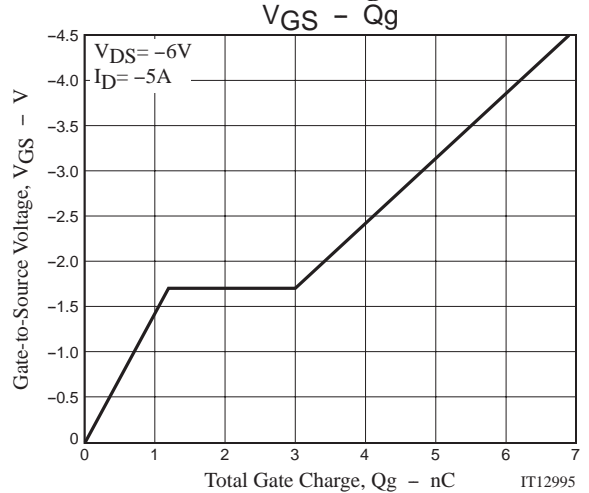
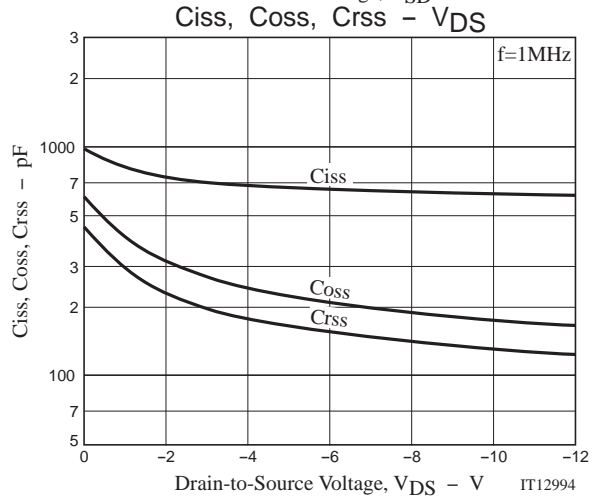
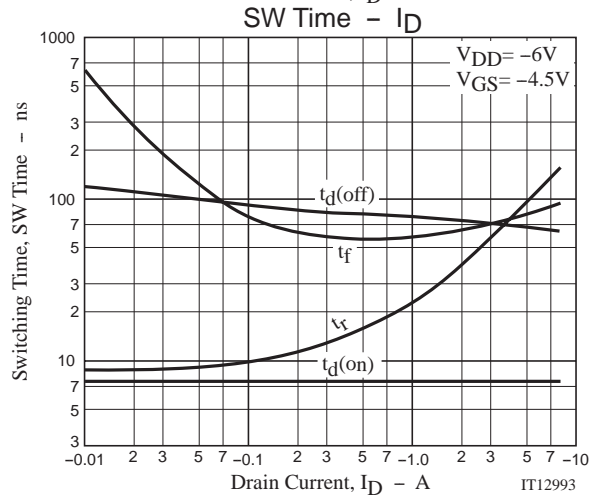
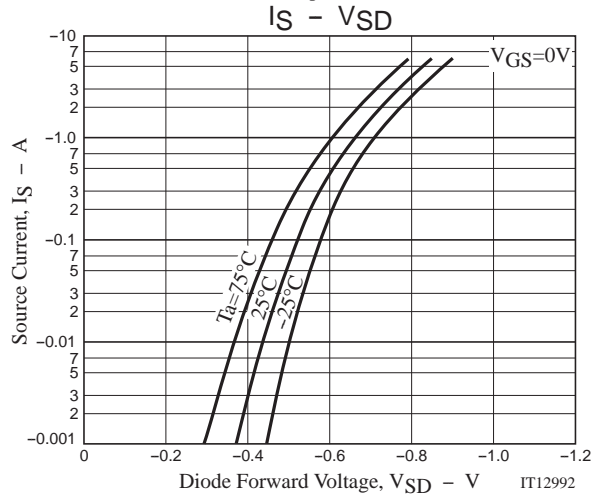
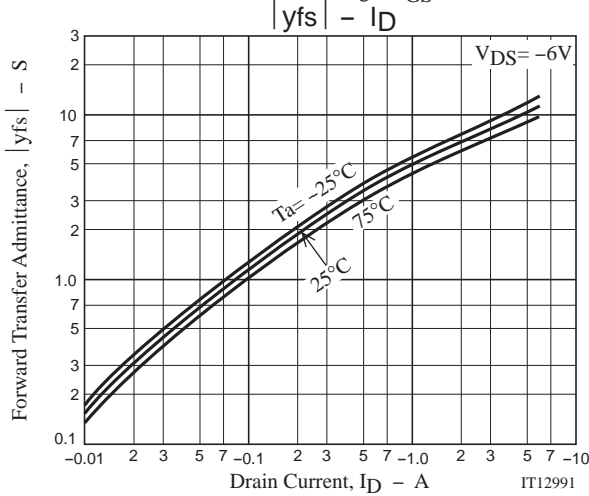
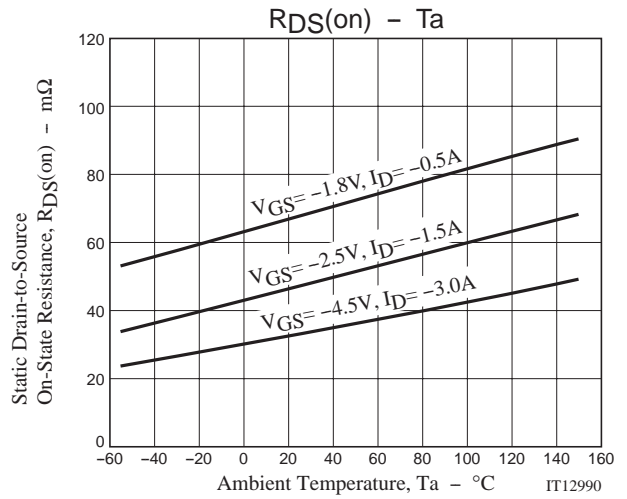
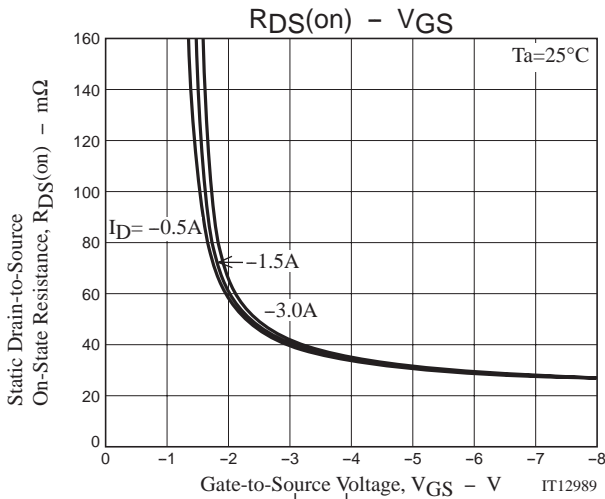
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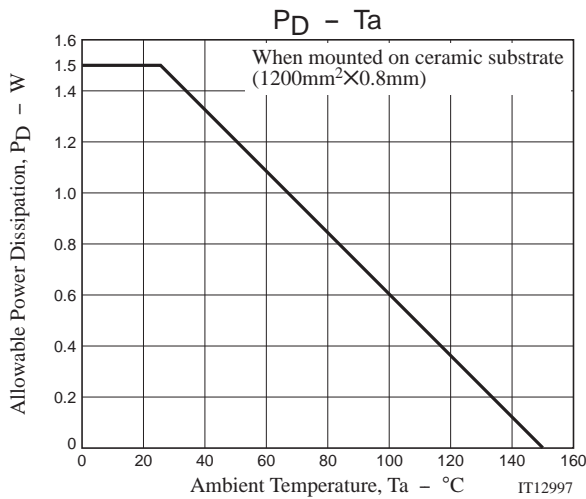


Switching Time Test Circuit



MCH6336





Note on usage : Since the MCH6336 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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