

SANYO Semiconductors DATA SHEET

MCH3333-

P-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- · Low ON-resistance.
- · Ultrahigh-speed switching.
- · 2.5V drive.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		-30	V
Gate-to-Source Voltage	VGSS		±10	V
Drain Current (DC)	ID		-1.5	Α
Drain Current (Pulse)	IDP	PW≤10μs, duty cycle≤1%	-6.0	Α
Allowable Power Dissipation	PD	Mounted on a ceramic board (900mm ² X0.8mm)	0.9	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Electrical Characteristics at Ta=25°C

Parameter	Symbol	Conditions	Ratings			Linit
			min	typ	max	Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=-1mA, VGS=0	-30			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =-30V, V _{GS} =0			-1	μΑ
Gate-to-Source Leakage Current	IGSS	V _{GS} =±8V, V _{DS} =0			±10	μΑ
Cutoff Voltage	VGS(off)	VDS=-10V, ID=-1mA	-0.4		-1.4	V
Forward Transfer Admittance	yfs	V _{DS} =-10V, I _D =-0.8A	1.38	2.3		S
Static Drain-to-Source On-State Resistance	R _{DS} (on)1	I _D =-0.8A, V _G S=-4V		215	280	mΩ
	RDS(on)2	ID=-0.4A, VGS=-2.5V		290	410	mΩ
Input Capacitance	Ciss	V _{DS} =-10V, f=1MHz		285		pF
Output Capacitance	Coss	V _{DS} =-10V, f=1MHz		52		pF
Reverse Transfer Capacitance	Crss	VDS=-10V, f=1MHz		38		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		10		ns
Rise Time	t _r	See specified Test Circuit.		21		ns
Turn-OFF Delay Time	t _d (off)	See specified Test Circuit.		35		ns
Fall Time	tf	See specified Test Circuit.		28		ns

Marking: YJ Continued on next page.

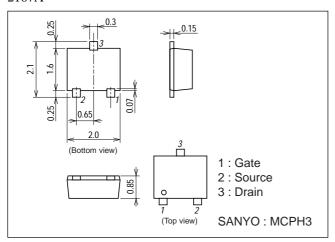
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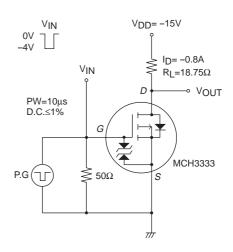
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	Oill
Total Gate Charge	Qg	V _{DS} =-10V, V _{GS} =-4V, I _D =-1.5A		2.6		nC
Gate-to-Source Charge	Qgs	V _{DS} =-10V, V _{GS} =-4V, I _D =-1.5A		0.78		nC
Gate-to-Drain "Miller" Charge	Qgd	V _{DS} =-10V, V _{GS} =-4V, I _D =-1.5A		0.64		nC
Diode Forward Voltage	VSD	IS=-1.5A, VGS=0		-0.89	-1.5	V

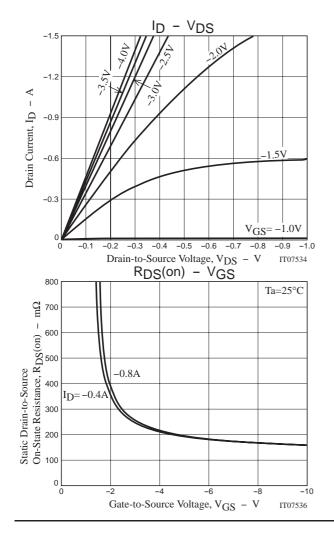
Package Dimensions

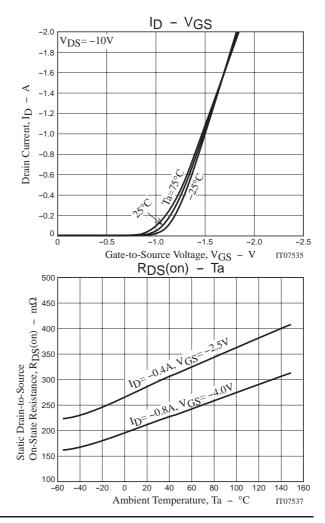
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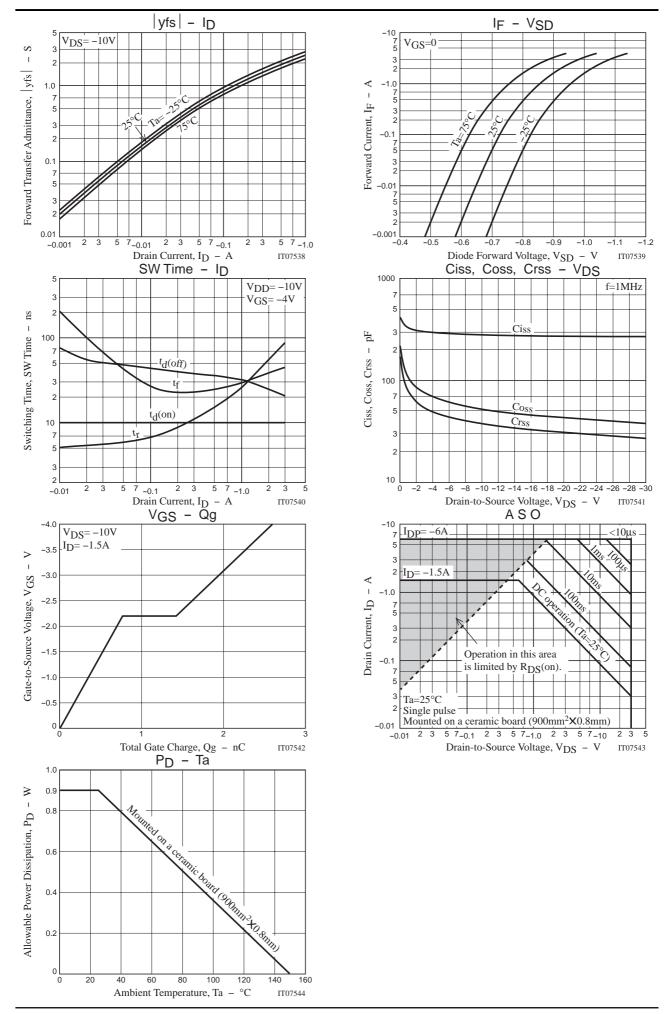


Switching Time Test Circuit









Note on usage: Since the MCH3333 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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