



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

SCH1435 — N-Channel Silicon MOSFET

General-Purpose Switching Device

Applications

Features

- 1.8V drive.
- Halogen free compliance.

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V _{DSS}		30	V
Gate-to-Source Voltage	V _{GSS}		±12	V
Drain Current (DC)	I _D		3	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	12	A
Allowable Power Dissipation	P _D	When mounted on ceramic substrate (900mm ² ×0.8mm)	0.8	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	30			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V, V _{GS} =0V			1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±8V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =10V, I _D =1mA	0.4		1.3	V
Forward Transfer Admittance	y _{fs}	V _{DS} =10V, I _D =1.5A		2.7		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =1.5A, V _{GS} =4.5V		68	89	mΩ
	R _{DS(on)2}	I _D =0.75A, V _{GS} =2.5V		90	126	mΩ
	R _{DS(on)3}	I _D =0.3A, V _{GS} =1.8V		130	195	mΩ

Marking : ZL

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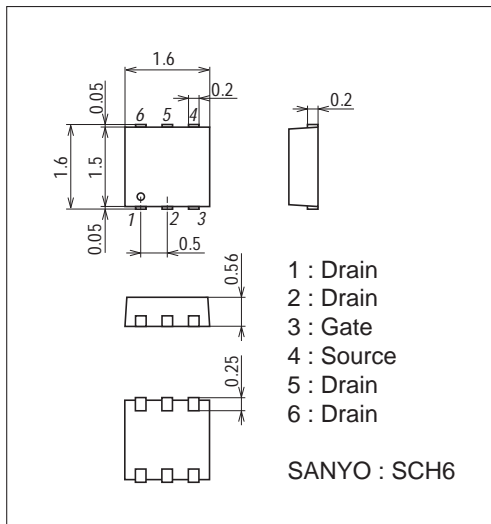
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Input Capacitance	Ciss	$V_{DS}=10V, f=1MHz$		265		pF
Output Capacitance	Coss	$V_{DS}=10V, f=1MHz$		35		pF
Reverse Transfer Capacitance	Crss	$V_{DS}=10V, f=1MHz$		28		pF
Turn-ON Delay Time	$t_{d(on)}$	See specified Test Circuit.		5.1		ns
Rise Time	t_r	See specified Test Circuit.		10		ns
Turn-OFF Delay Time	$t_{d(off)}$	See specified Test Circuit.		137		ns
Fall Time	t_f	See specified Test Circuit.		36		ns
Total Gate Charge	Qg	$V_{DS}=15V, V_{GS}=4.5V, I_D=3A$		3.5		nC
Gate-to-Source Charge	Qgs	$V_{DS}=15V, V_{GS}=4.5V, I_D=3A$		0.57		nC
Gate-to-Drain "Miller" Charge	Qgd	$V_{DS}=15V, V_{GS}=4.5V, I_D=3A$		0.93		nC
Diode Forward Voltage	VSD	$I_S=3A, V_{GS}=0V$		0.87	1.2	V

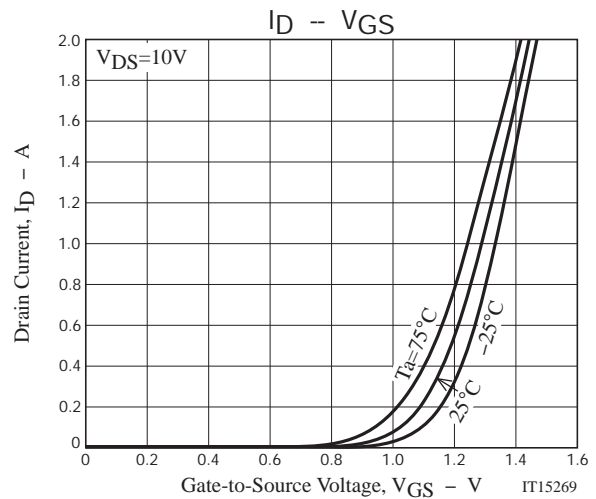
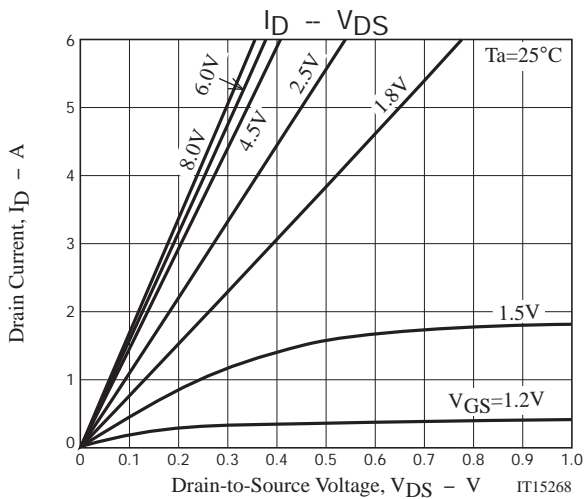
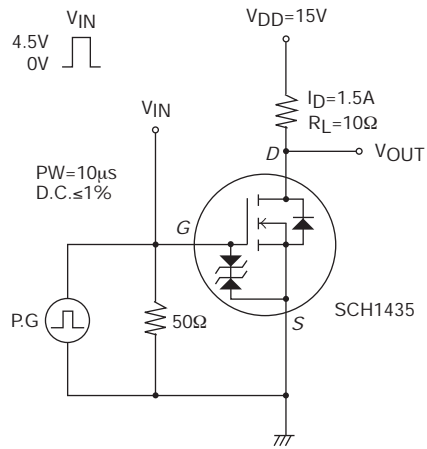
Package Dimensions

unit : mm (typ)

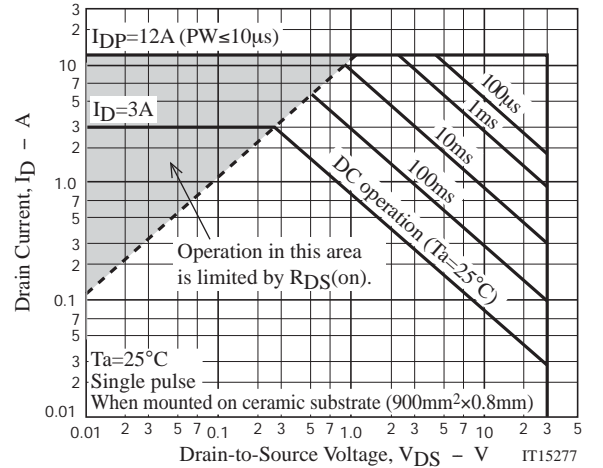
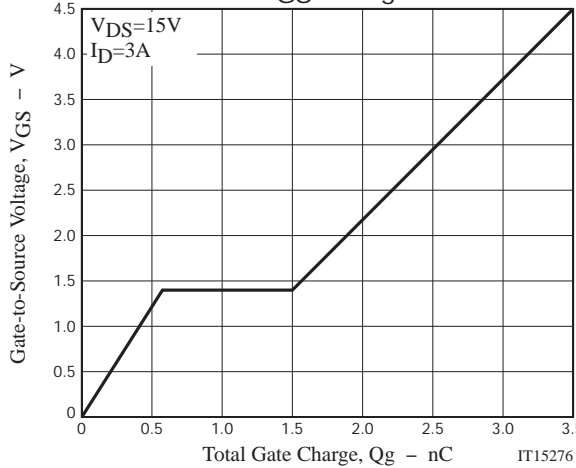
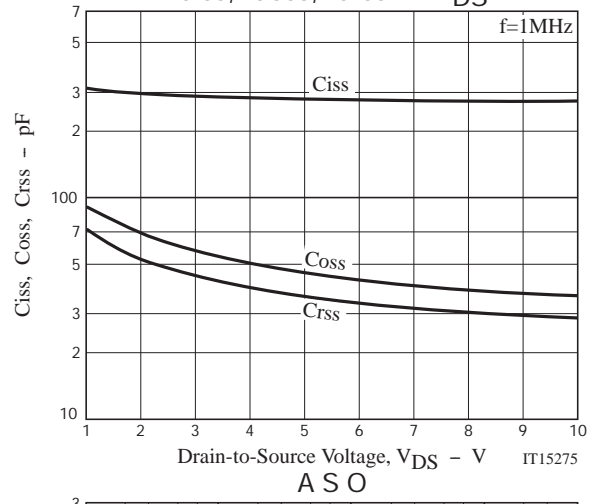
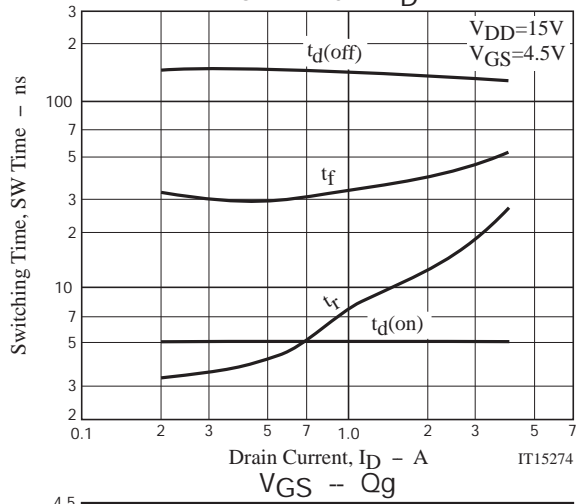
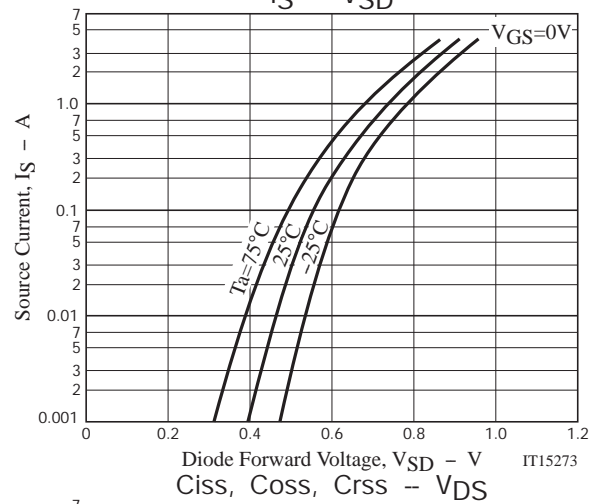
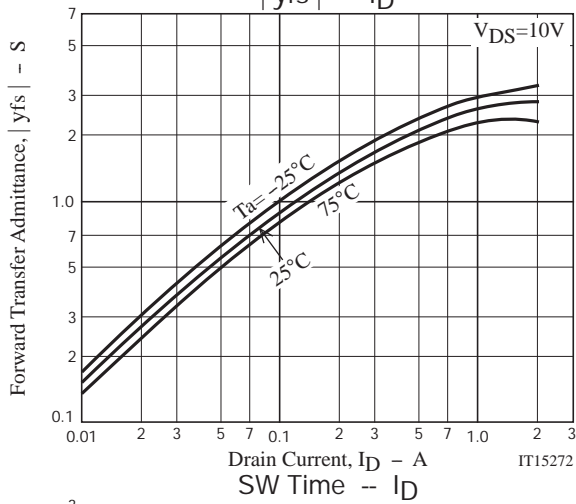
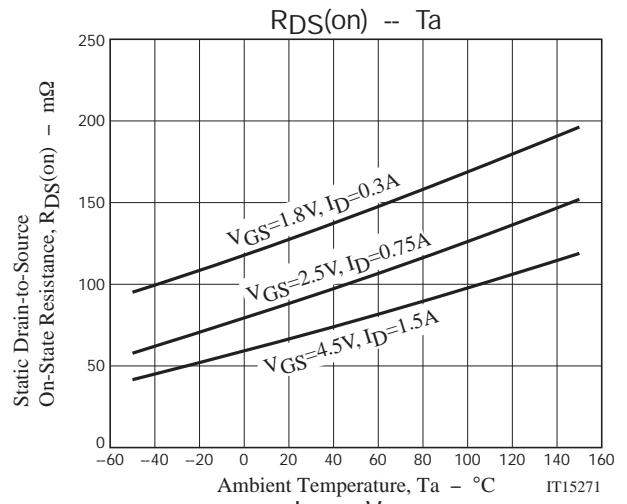
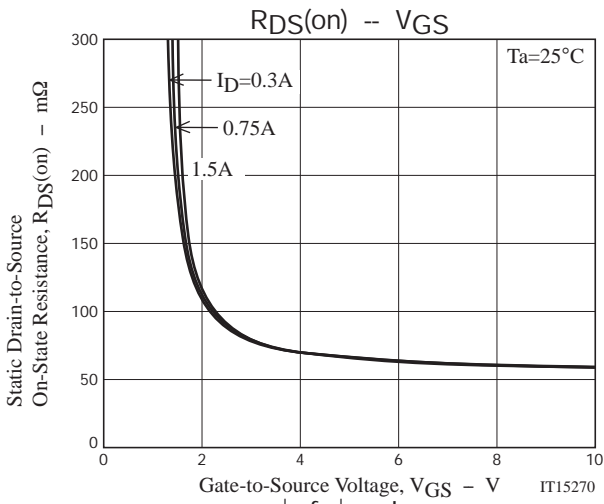
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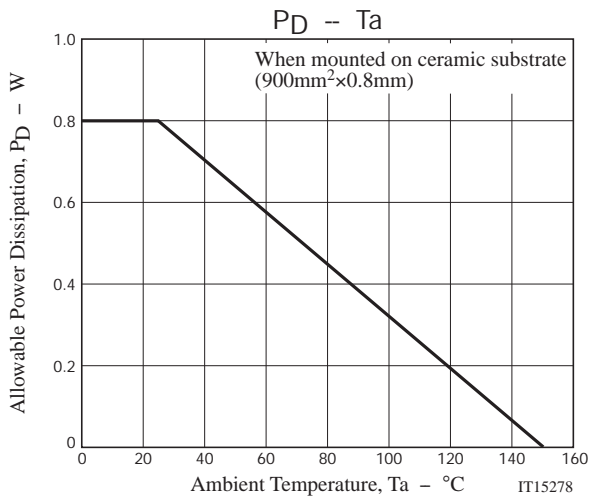


Switching Time Test Circuit



SCH1435





Note on usage : Since the SCH1435 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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