



SANYO Semiconductors

# DATA SHEET

An ON Semiconductor Company

## SCH1434 — N-Channel Silicon MOSFET — General-Purpose Switching Device Applications

### Features

- 1.8V drive
- Halogen free compliance

### Specifications

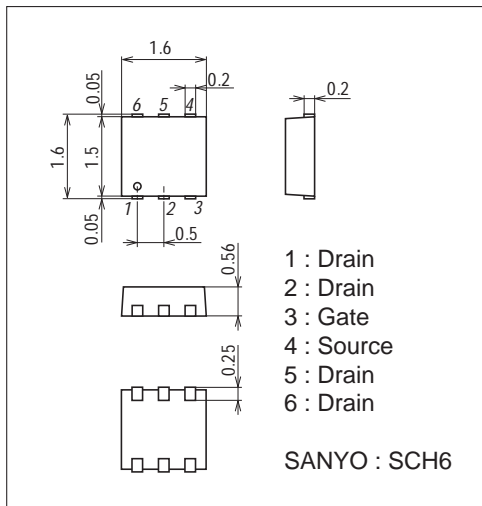
Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V <sub>DSS</sub>		30	V
Gate-to-Source Voltage	V <sub>GSS</sub>		±12	V
Drain Current (DC)	I <sub>D</sub>		2	A
Drain Current (Pulse)	I <sub>DP</sub>	PW≤10μs, duty cycle≤1%	8	A
Allowable Power Dissipation	P <sub>D</sub>	When mounted on ceramic substrate (900mm <sup>2</sup> ×0.8mm)	0.8	W
Channel Temperature	T <sub>ch</sub>		150	°C
Storage Temperature	T <sub>stg</sub>		-55 to +150	°C

### Package Dimensions

unit : mm (typ)

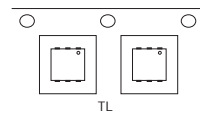
7028-002



### Product & Package Information

- Package : SCH6
- JEITA, JEDEC : -
- Minimum Packing Quantity : 5,000 pcs./reel

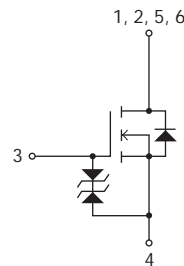
Packing Type : TL



Marking



### Electrical Connection

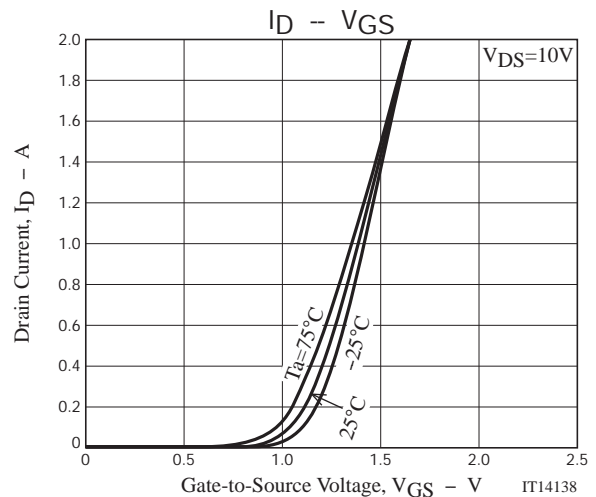
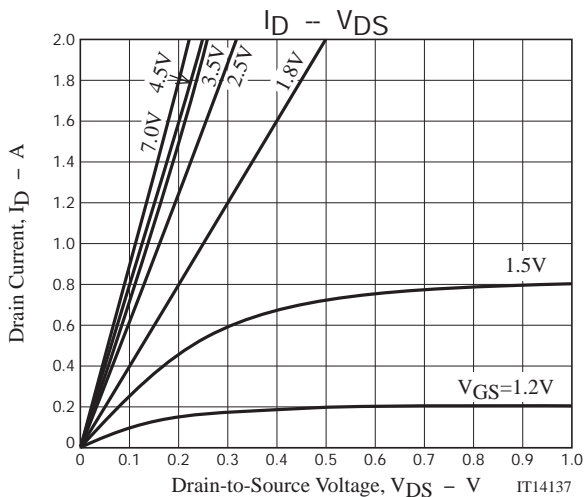
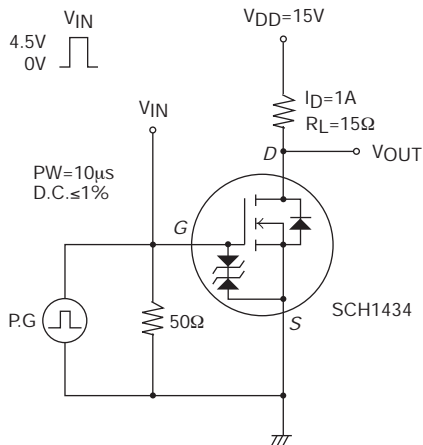


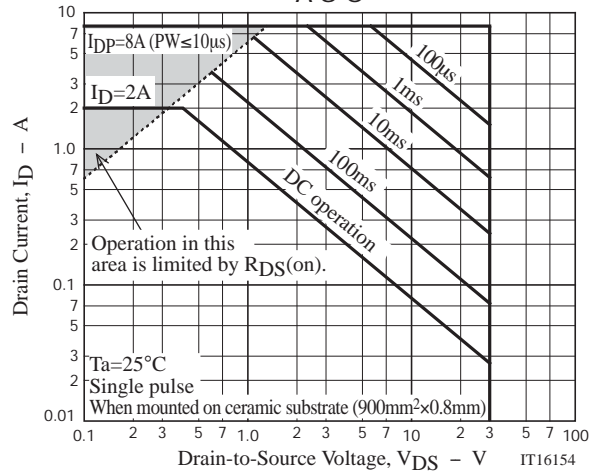
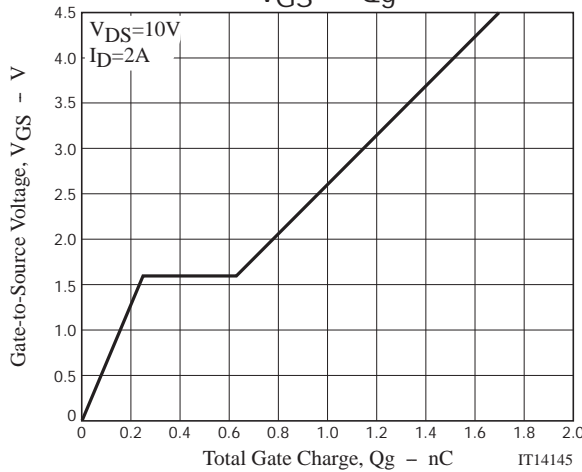
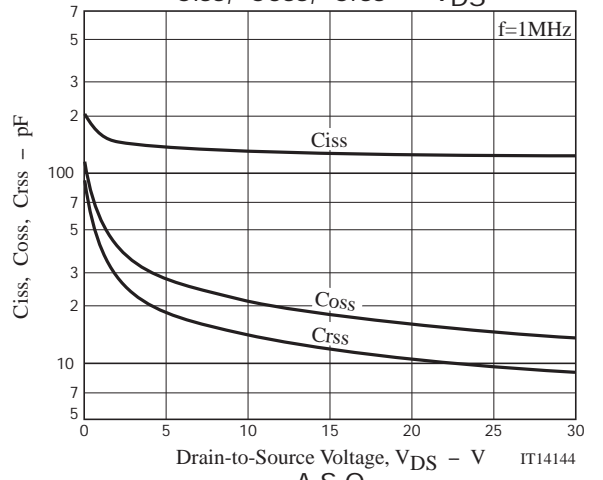
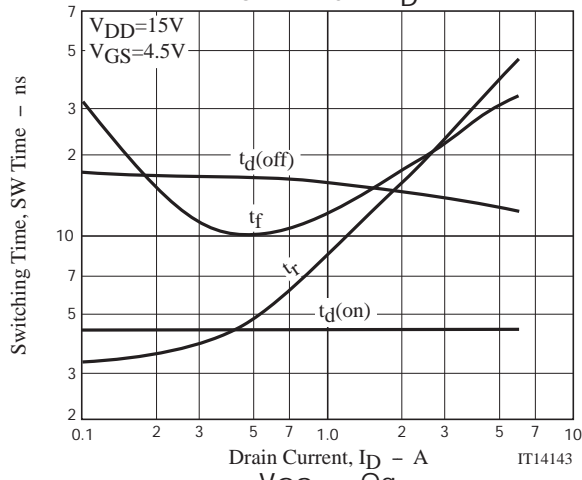
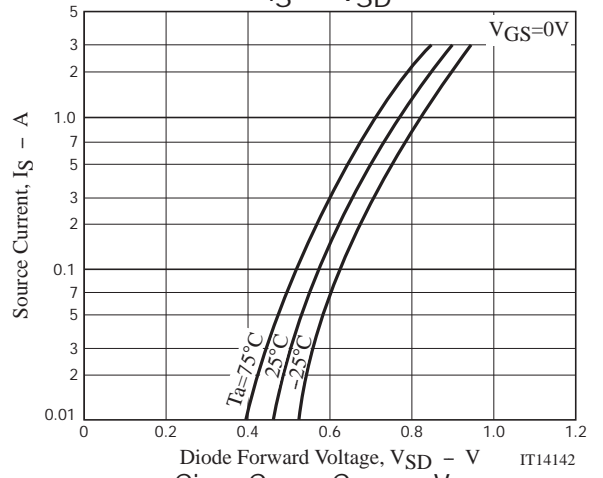
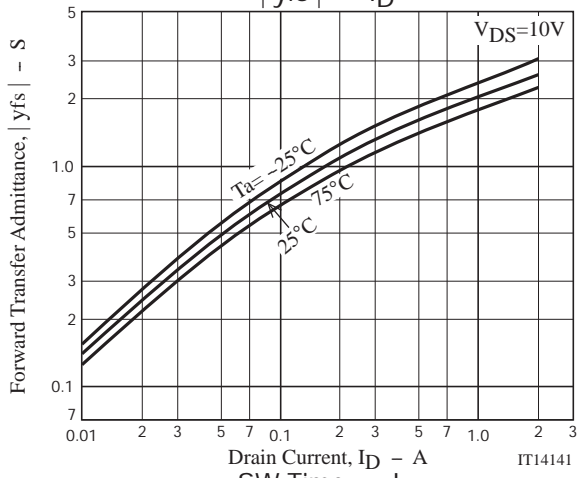
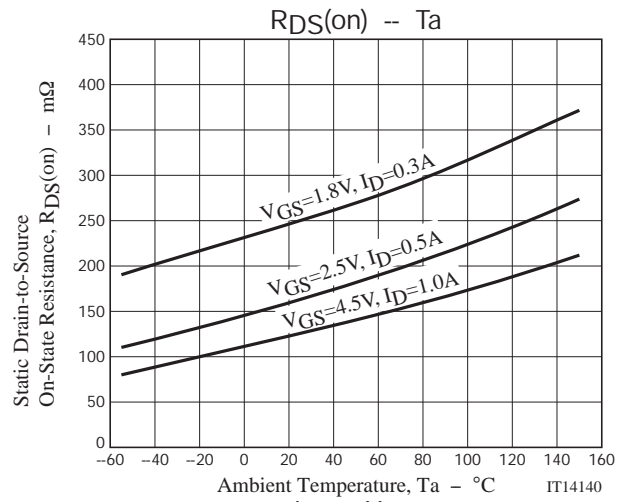
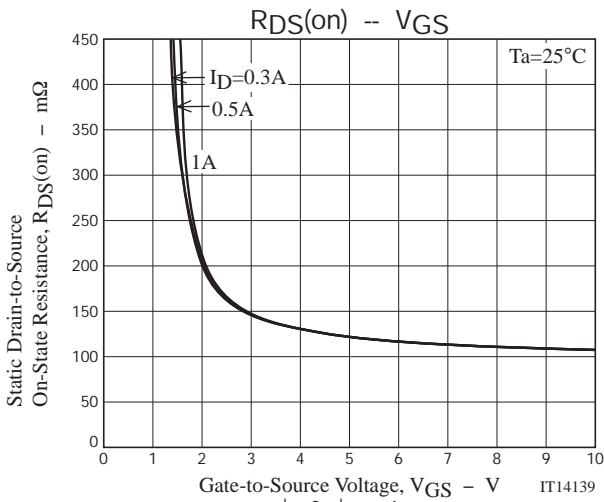
# SCH1434

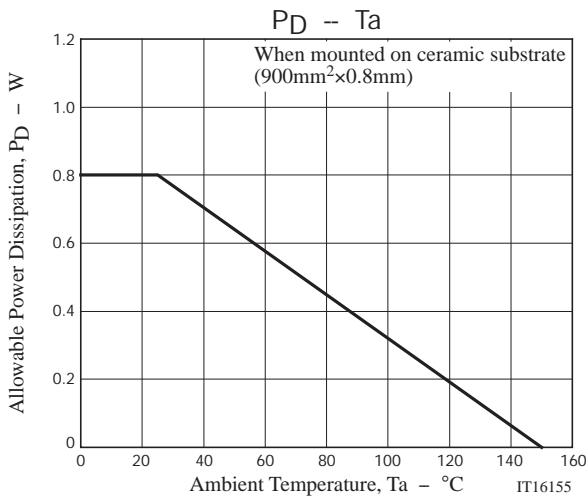
## Electrical Characteristics at Ta=25°C

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	$\mu A$
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 8V, V_{DS}=0V$			$\pm 10$	$\mu A$
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10V, I_D=1mA$	0.4		1.3	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=10V, I_D=1A$		2.0		S
Static Drain-to-Source On-State Resistance	$R_{DS(on)1}$	$I_D=1A, V_{GS}=4.5V$		125	165	$m\Omega$
	$R_{DS(on)2}$	$I_D=0.5A, V_{GS}=2.5V$		165	235	$m\Omega$
	$R_{DS(on)3}$	$I_D=0.3A, V_{GS}=1.8V$		250	375	$m\Omega$
Input Capacitance	$C_{iss}$	$V_{DS}=10V, f=1MHz$		130		pF
Output Capacitance	$C_{oss}$	$V_{DS}=10V, f=1MHz$		21		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=10V, f=1MHz$		14		pF
Turn-ON Delay Time	$t_d(on)$	See specified Test Circuit.		4.4		ns
Rise Time	$t_r$	See specified Test Circuit.		8.7		ns
Turn-OFF Delay Time	$t_d(off)$	See specified Test Circuit.		16		ns
Fall Time	$t_f$	See specified Test Circuit.		12		ns
Total Gate Charge	$Q_g$	$V_{DS}=10V, V_{GS}=4.5V, I_D=2A$		1.7		nC
Gate-to-Source Charge	$Q_{gs}$	$V_{DS}=10V, V_{GS}=4.5V, I_D=2A$		0.25		nC
Gate-to-Drain "Miller" Charge	$Q_{gd}$	$V_{DS}=10V, V_{GS}=4.5V, I_D=2A$		0.38		nC
Diode Forward Voltage	$V_{SD}$	$I_S=2A, V_{GS}=0V$		0.85	1.2	V

## Switching Time Test Circuit







Note on usage : Since the SCH1434 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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