



SANYO Semiconductors

DATA SHEET

N-Channel Silicon MOSFET

SCH1436 — General-Purpose Switching Device Applications

Features

- ON-resistance $R_{DS(on)} = 135\text{m}\Omega$ (typ.)
- 4V drive
- Halogen free compliance

Specifications

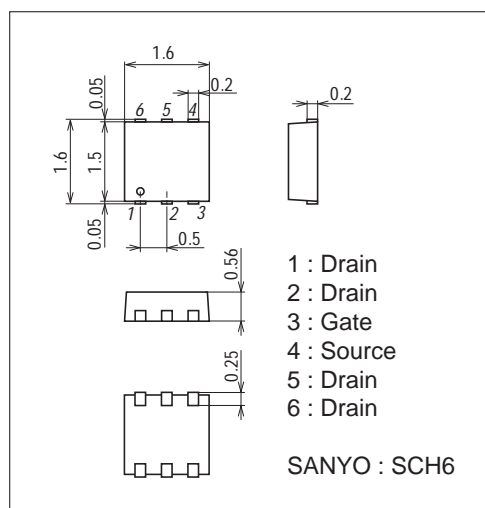
Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

| Parameter | Symbol | Conditions | Ratings | Unit |
|-----------------------------|-----------|--|-------------|------------------|
| Drain-to-Source Voltage | V_{DS} | | 30 | V |
| Gate-to-Source Voltage | V_{GS} | | ± 20 | V |
| Drain Current (DC) | I_D | | 1.8 | A |
| Drain Current (Pulse) | I_{DP} | $PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$ | 7.2 | A |
| Allowable Power Dissipation | P_D | When mounted on ceramic substrate ($900\text{mm}^2 \times 0.8\text{mm}$) | 0.8 | W |
| Channel Temperature | T_{ch} | | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ\text{C}$ |

Package Dimensions

unit : mm (typ)

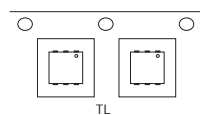
7028-002



Product & Package Information

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

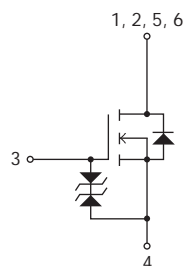
Packing Type : TL



Marking



Electrical Connection

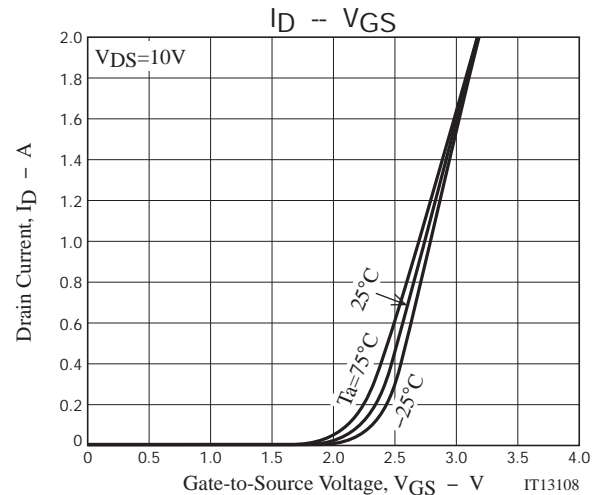
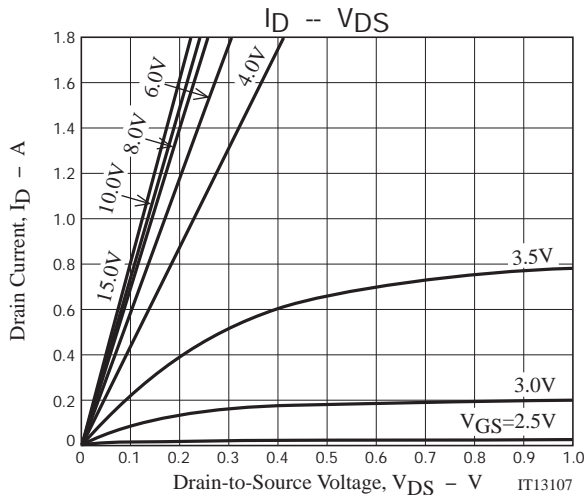
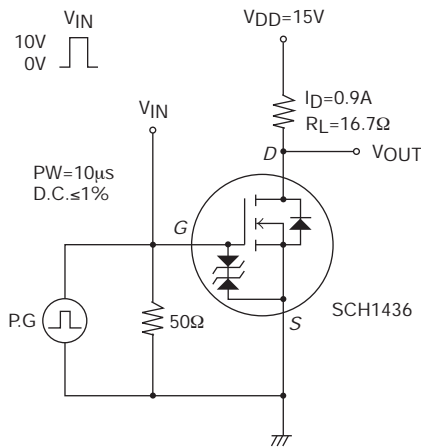


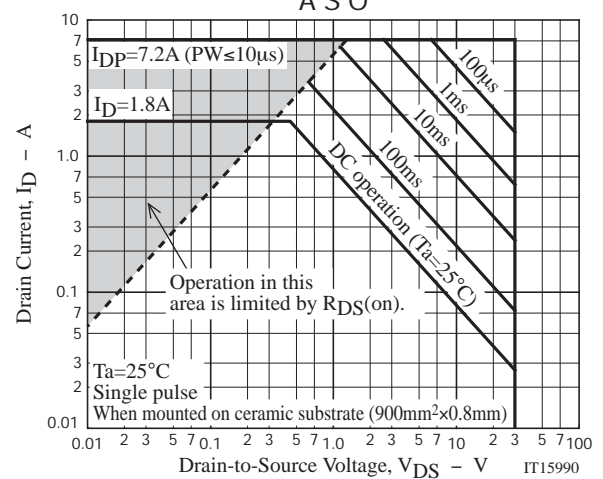
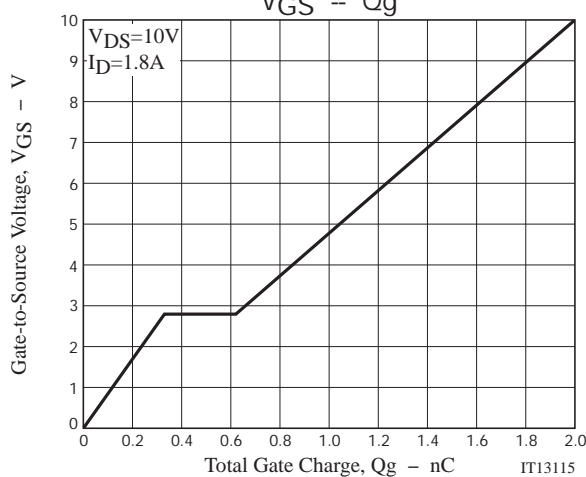
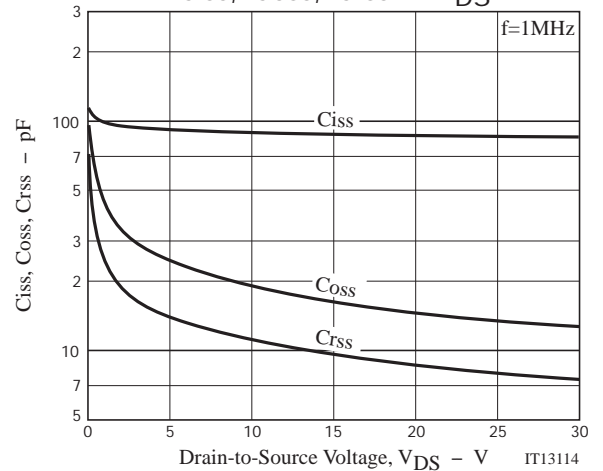
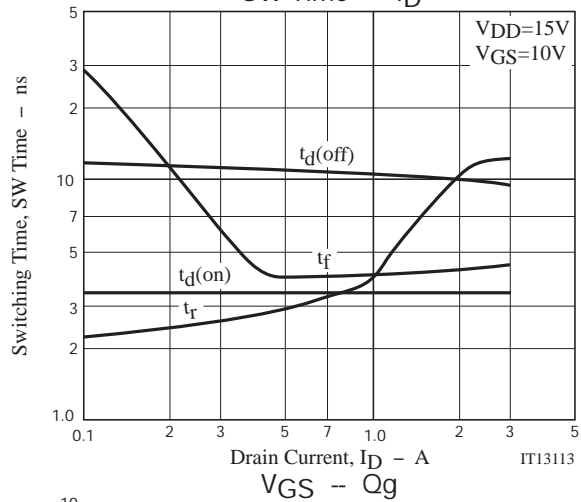
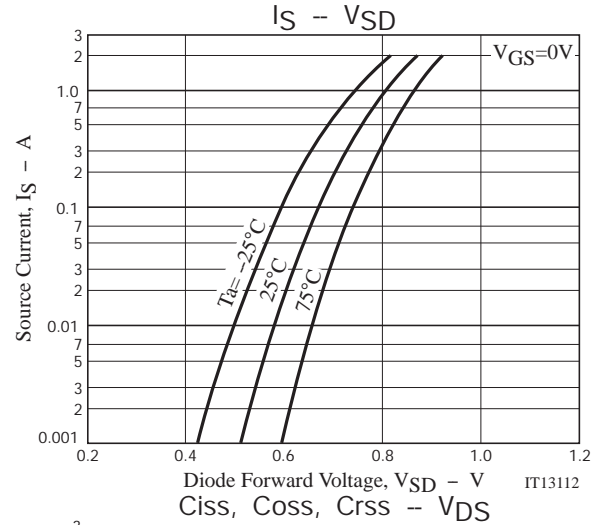
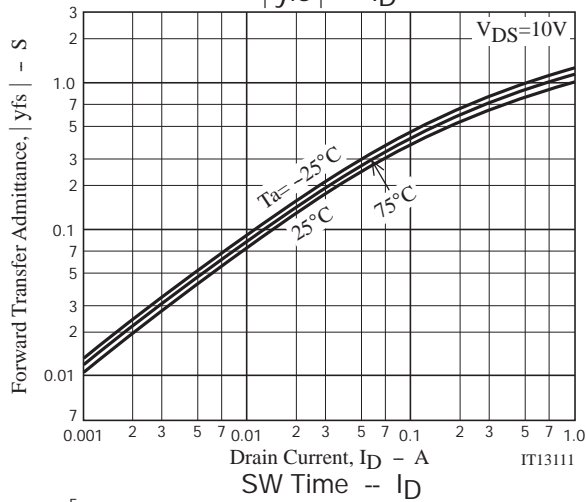
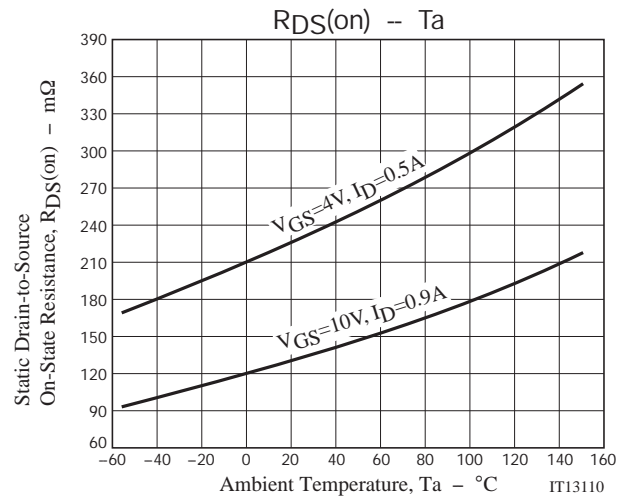
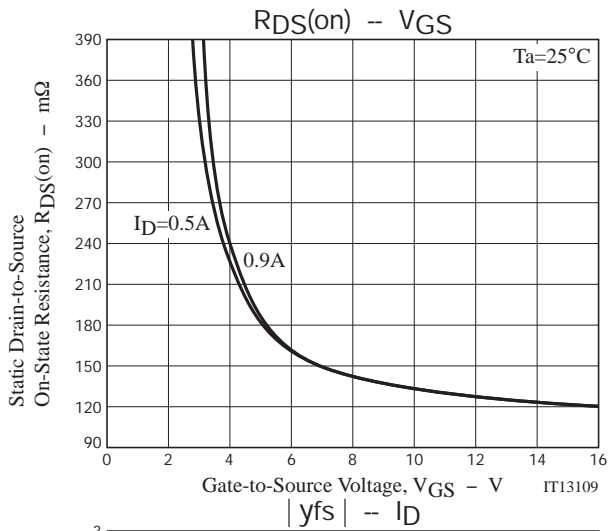
SCH1436

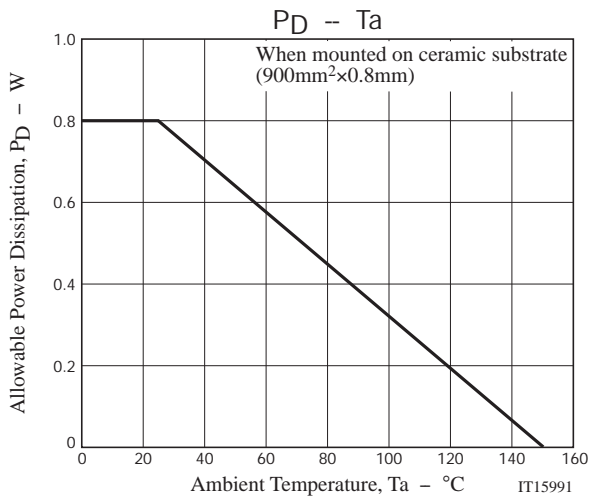
Electrical Characteristics at Ta=25°C

| 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} | $V_{GS}=\pm 16V, V_{DS}=0V$ | | | ± 10 | μA |
| Cutoff Voltage | $V_{GS(off)}$ | $V_{DS}=10V, I_D=1mA$ | 1.2 | | 2.6 | V |
| Forward Transfer Admittance | $ y_{fs} $ | $V_{DS}=10V, I_D=0.9A$ | | 1.1 | | S |
| Static Drain-to-Source On-State Resistance | $R_{DS(on)1}$ | $I_D=0.9A, V_{GS}=10V$ | | 135 | 180 | $m\Omega$ |
| | $R_{DS(on)2}$ | $I_D=0.5A, V_{GS}=4V$ | | 230 | 330 | $m\Omega$ |
| Input Capacitance | C_{iss} | $V_{DS}=10V, f=1MHz$ | | 88 | | pF |
| Output Capacitance | C_{oss} | $V_{DS}=10V, f=1MHz$ | | 19 | | pF |
| Reverse Transfer Capacitance | C_{rss} | $V_{DS}=10V, f=1MHz$ | | 11 | | pF |
| Turn-ON Delay Time | $t_{d(on)}$ | See specified Test Circuit. | | 3.4 | | ns |
| Rise Time | t_r | See specified Test Circuit. | | 4.0 | | ns |
| Turn-OFF Delay Time | $t_{d(off)}$ | See specified Test Circuit. | | 10.4 | | ns |
| Fall Time | t_f | See specified Test Circuit. | | 4.2 | | ns |
| Total Gate Charge | Q_g | $V_{DS}=10V, V_{GS}=10V, I_D=1.8A$ | | 2.0 | | nC |
| Gate-to-Source Charge | Q_{gs} | $V_{DS}=10V, V_{GS}=10V, I_D=1.8A$ | | 0.33 | | nC |
| Gate-to-Drain "Miller" Charge | Q_{gd} | $V_{DS}=10V, V_{GS}=10V, I_D=1.8A$ | | 0.29 | | nC |
| Diode Forward Voltage | V_{SD} | $I_S=1.8A, V_{GS}=0V$ | | 0.86 | 1.2 | V |

Switching Time Test Circuit







Note on usage : Since the SCH1436 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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