



SCH1436 — N-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- ON-resistance $R_{DS(on)1}=135m\Omega$ (typ.)
- 4V drive
- Halogen free compliance

Specifications

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

| Parameter | Symbol | Conditions | Ratings | Unit |
|-----------------------------|-----------|---|-------------|------------|
| Drain-to-Source Voltage | V_{DSS} | | 30 | V |
| Gate-to-Source Voltage | V_{GSS} | | ± 20 | V |
| Drain Current (DC) | I_D | | 1.8 | A |
| Drain Current (Pulse) | I_{DP} | $PW \leq 10\mu s$, duty cycle $\leq 1\%$ | 7.2 | A |
| Allowable Power Dissipation | P_D | When mounted on ceramic substrate (900mm ² x0.8mm) | 0.8 | W |
| Channel Temperature | T_{ch} | | 150 | $^\circ C$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ C$ |

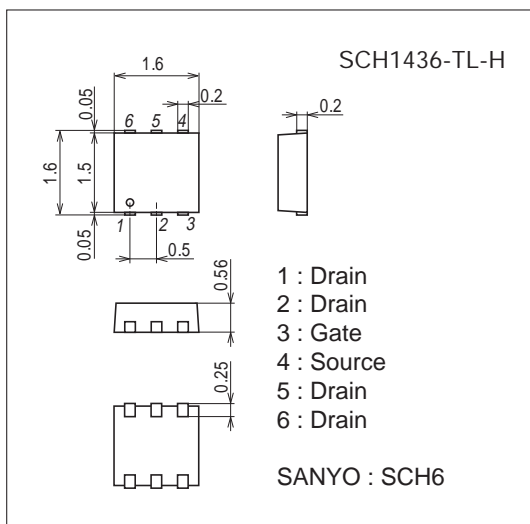
This product is designed to "ESD immunity < 200V**", so please take care when handling.

* Machine Model

Package Dimensions

unit : mm (typ)

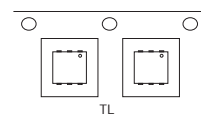
7028-002



Product & Package Information

- Package : SCH6
- JEITA, JEDEC : SOT-563
- Minimum Packing Quantity : 5,000 pcs./reel

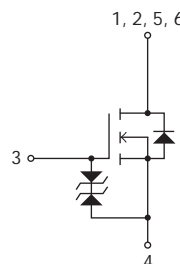
Packing Type : TL



Marking



Electrical Connection

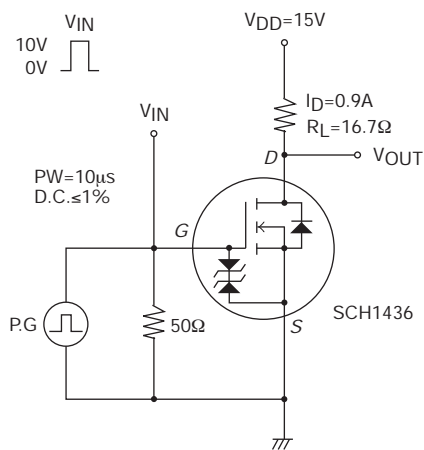


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Electrical Characteristics at Ta=25°C

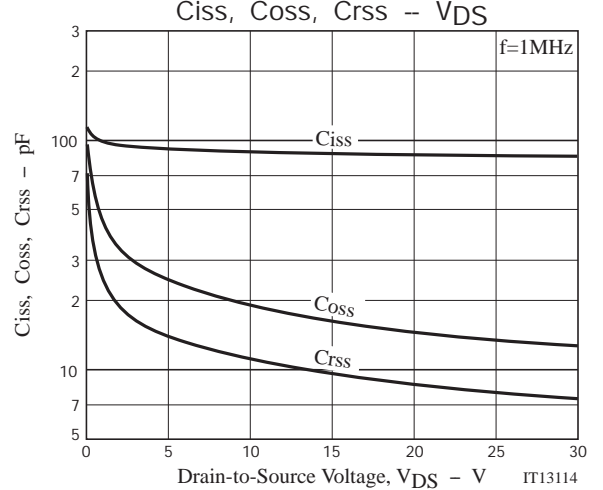
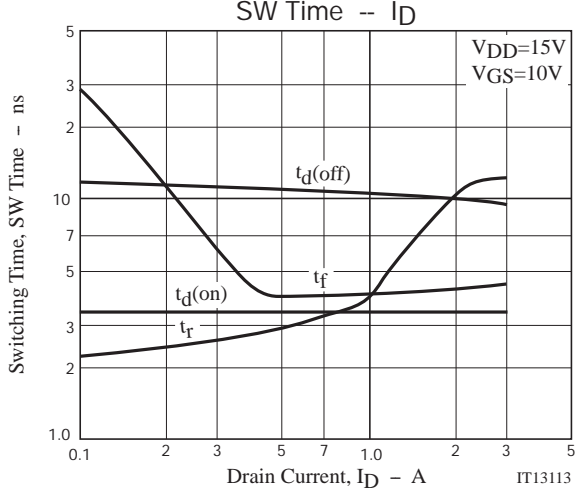
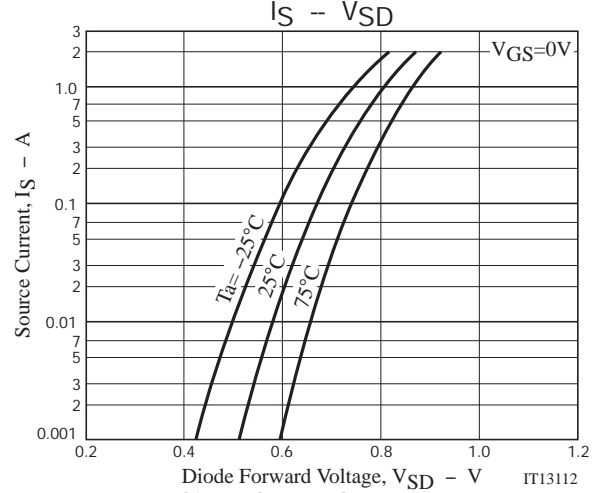
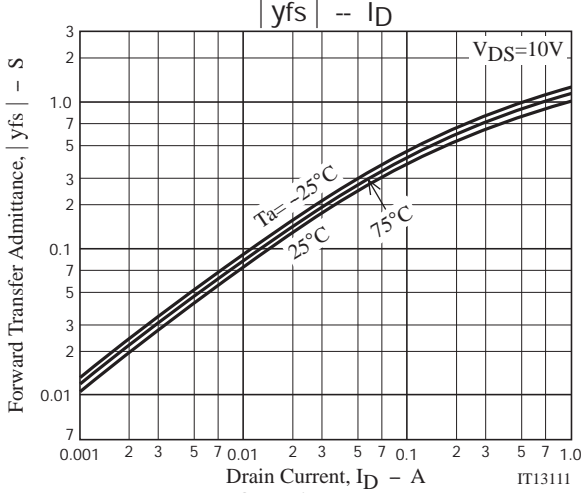
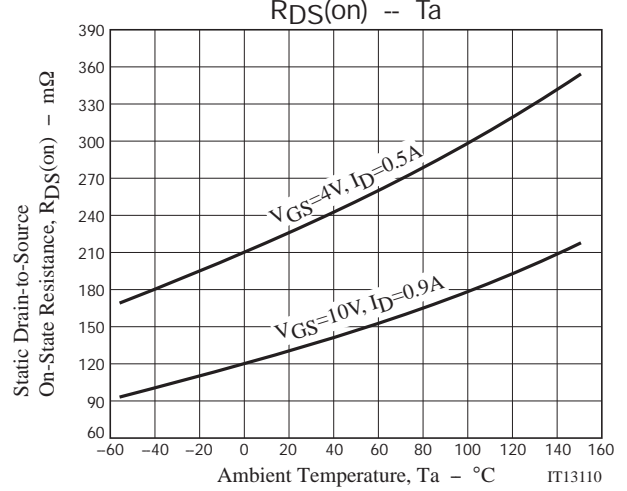
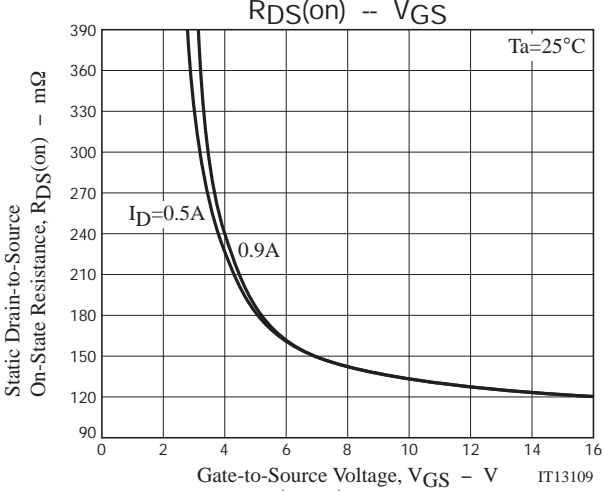
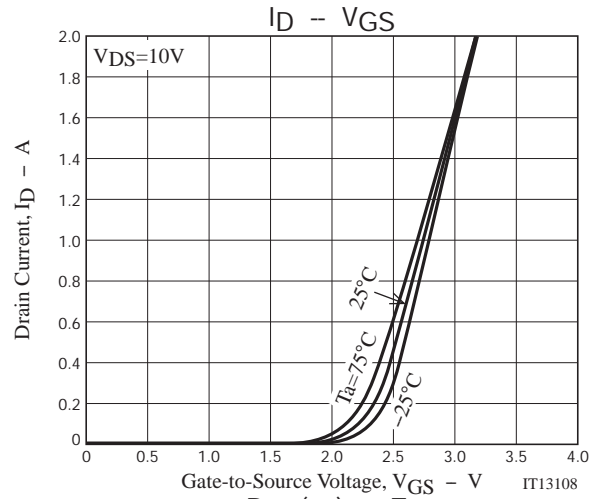
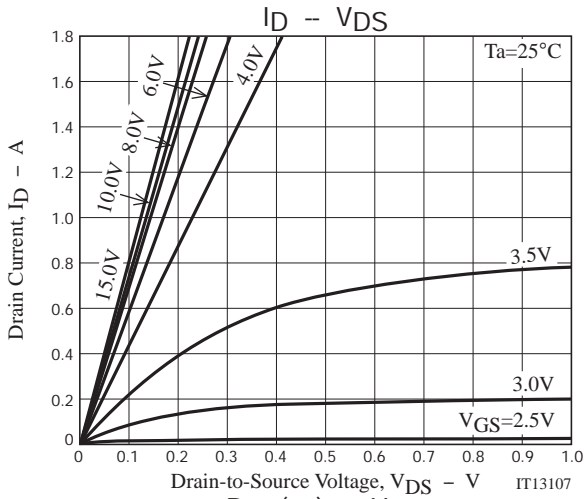
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--|----------------------|--|---|------|------|------|
| | | | min | typ | max | |
| Drain-to-Source Breakdown Voltage | V(BR)DSS | I _D =1mA, V _{GS} =0V | 30 | | | V |
| Zero-Gate Voltage Drain Current | I _{DSS} | V _{DS} =30V, V _{GS} =0V | | | 1 | μA |
| Gate-to-Source Leakage Current | I _{GSS} | V _{GS} =±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 | mΩ |
| | R _{DS(on)2} | I _D =0.5A, V _{GS} =4V | | 230 | 330 | mΩ |
| Input Capacitance | C _{iss} | V _{DS} =10V, f=1MHz | | 88 | | pF |
| Output Capacitance | C _{oss} | | | 19 | | pF |
| Reverse Transfer Capacitance | C _{rss} | | | 11 | | pF |
| Turn-ON Delay Time | t _{d(on)} | | See specified Test Circuit. | | 3.4 | |
| Rise Time | t _r | | | 4.0 | | ns |
| Turn-OFF Delay Time | t _{d(off)} | | | 10.4 | | ns |
| Fall Time | t _f | | | 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} | | | 0.33 | | nC |
| Gate-to-Drain "Miller" Charge | Q _{gd} | | | 0.29 | | nC |
| Diode Forward Voltage | V _{SD} | | I _S =1.8A, V _{GS} =0V | | 0.86 | 1.2 |

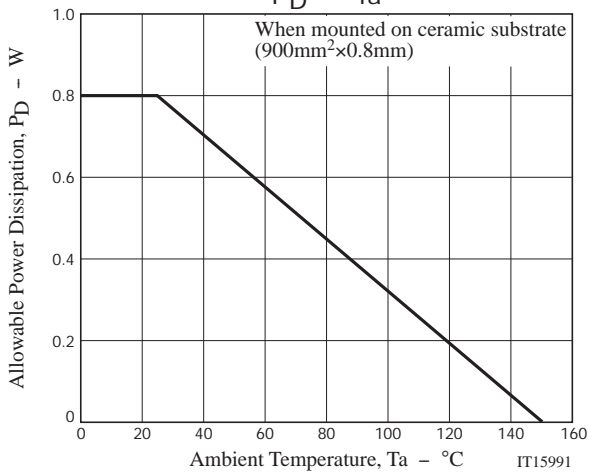
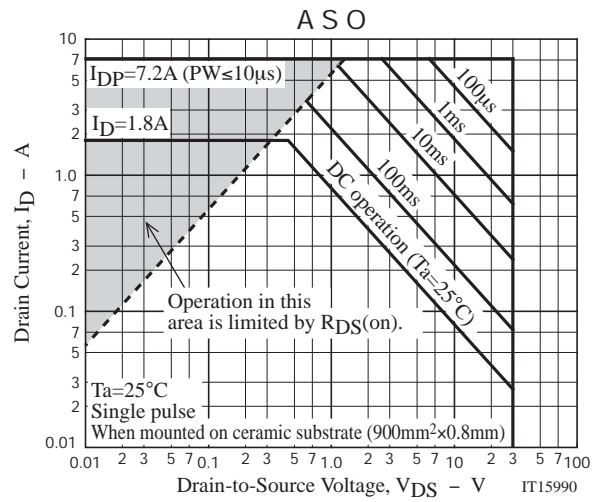
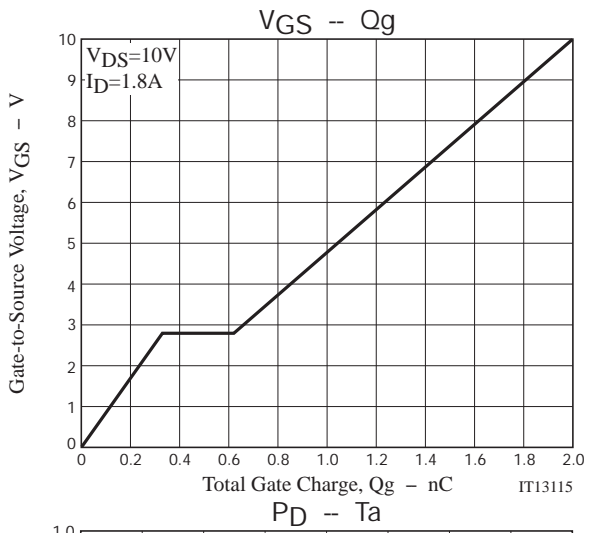
Switching Time Test Circuit



Ordering Information

| Device | Package | Shipping | memo |
|--------------|---------|----------------|--------------------------|
| SCH1436-TL-H | SCH6 | 5,000pcs./reel | Pb Free and Halogen Free |





Taping Specification

SCH1436-TL-H

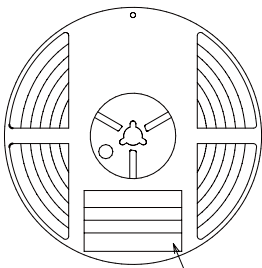
1. Packing Format

| Package Name | Carrier Tape Type | Maximum Number of devices contained (pcs) | | | Packing format | |
|--------------|-------------------|---|-----------|-----------|---|--|
| | | Reel | Inner box | Outer box | Inner BOX (C-1) | Outer BOX (A-7) |
| SCH6 | SCH6 | 5,000 | 25,000 | 150,000 | 5 reels contained Dimensions:mm (external) 183×72×185 | 6 inner boxes contained Dimensions:mm (external) 440×195×210 |

Reel label, Inner box label
(unit : mm)

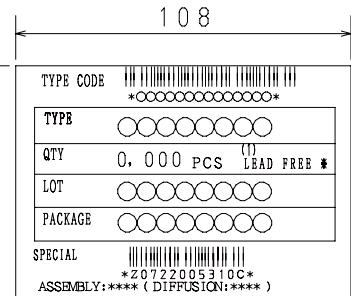
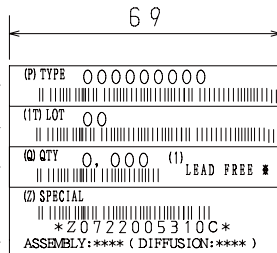
Outer box label
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.

Packing method



Type No.
LOT No.
Quantity
Origin

Reel label



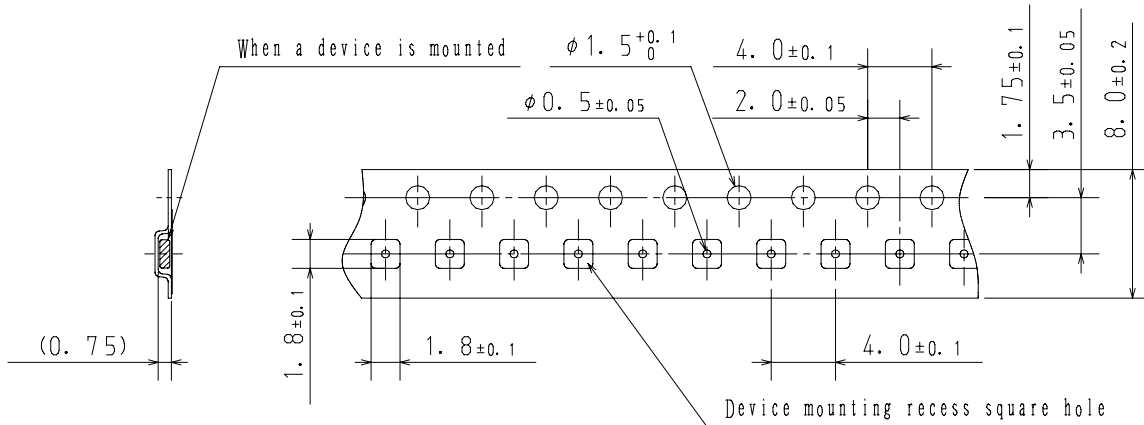
NOTE (1)

The LEAD FREE * description shows that the surface treatment of the terminal is lead free.

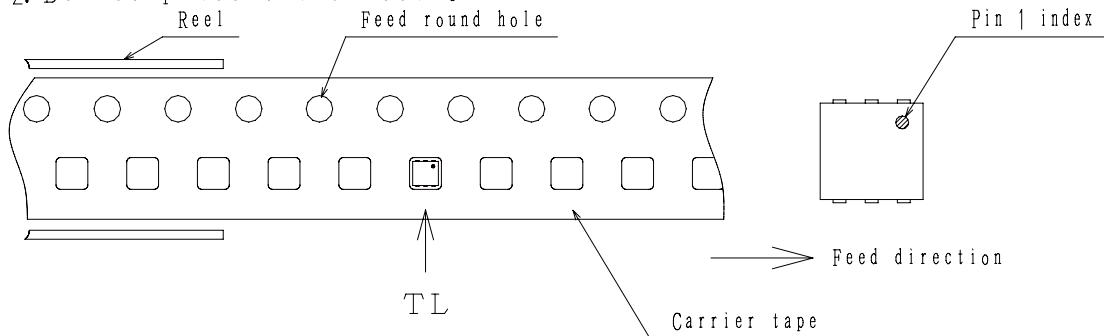
| Label | JEITA Phase |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3 |

2. Taping configuration

2-1. Carrier tape size (unit:mm)



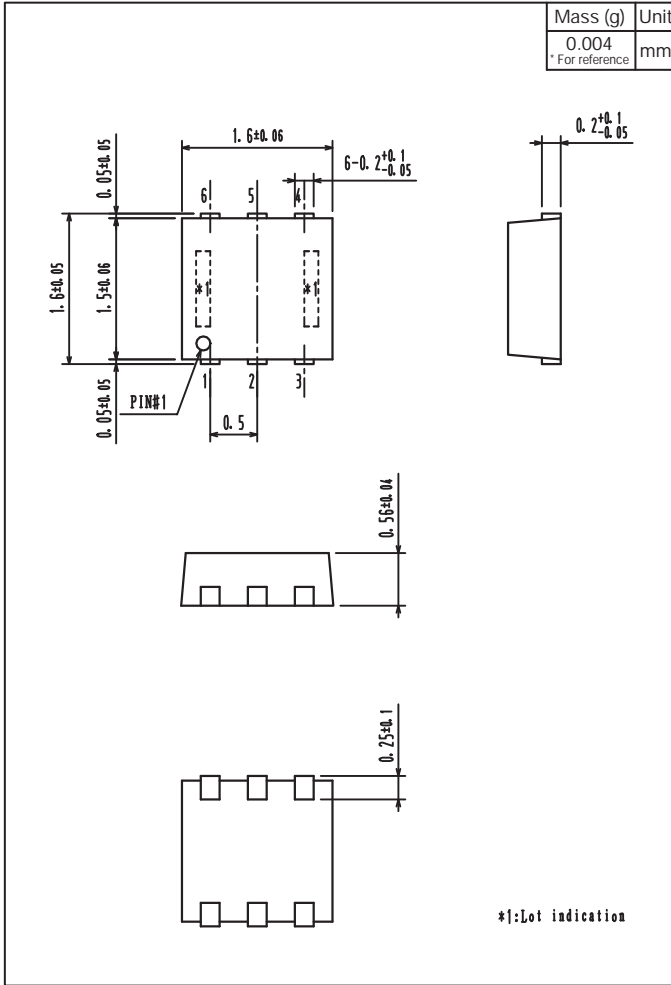
2-2. Device placement direction



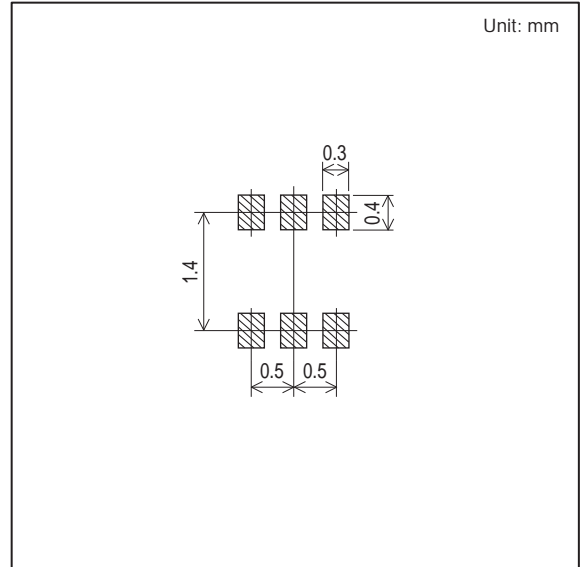
Those with pin 1 index on the feed hole side.....TL

SCH1436

Outline Drawing SCH1436-TL-H



Land Pattern Example



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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