



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

CPH3360 — P-Channel Silicon MOSFET General-Purpose Switching Device Applications

Features

- ON-resistance $R_{DS(on)1}=233m\Omega$ (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 | | -1.6 | A |
| Drain Current (Pulse) | I_{DP} | $PW \leq 10\mu s$, duty cycle $\leq 1\%$ | -6.4 | A |
| Allowable Power Dissipation | P_D | When mounted on ceramic substrate (90mm ² x0.8mm) | 0.9 | W |
| Channel Temperature | T_{ch} | | 150 | $^\circ C$ |
| Storage Temperature | T_{stg} | | -55 to +150 | $^\circ C$ |

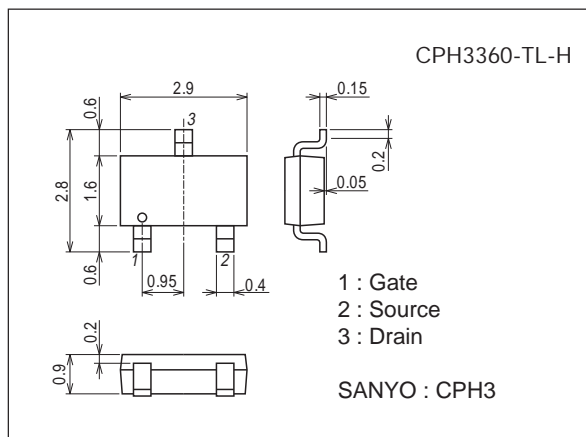
This product is designed to "ESD immunity < 200V"", so please take care when handling.

* Machine Model

Package Dimensions

unit : mm (typ)

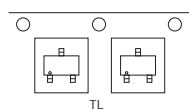
7015A-004



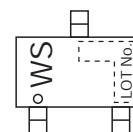
Product & Package Information

- Package : CPH3
- JEITA, JEDEC : SC-59, TO-236, SOT-23
- Minimum Packing Quantity : 3,000 pcs./reel

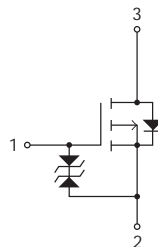
Packing Type: TL



Marking



Electrical Connection

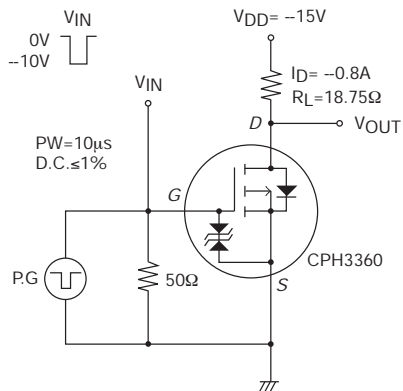


CPH3360

Electrical Characteristics at Ta=25°C

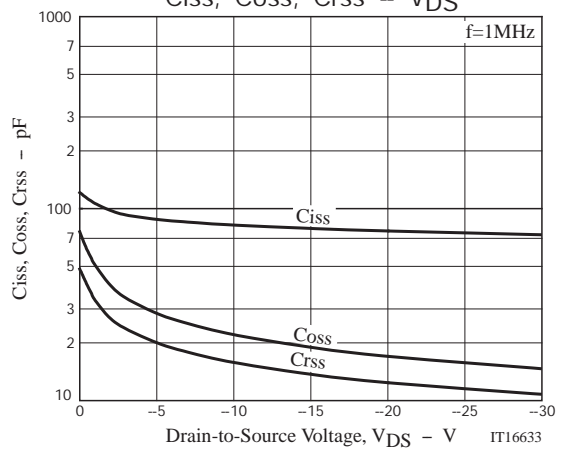
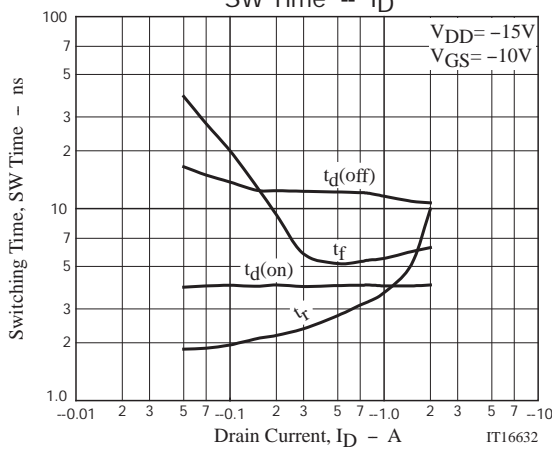
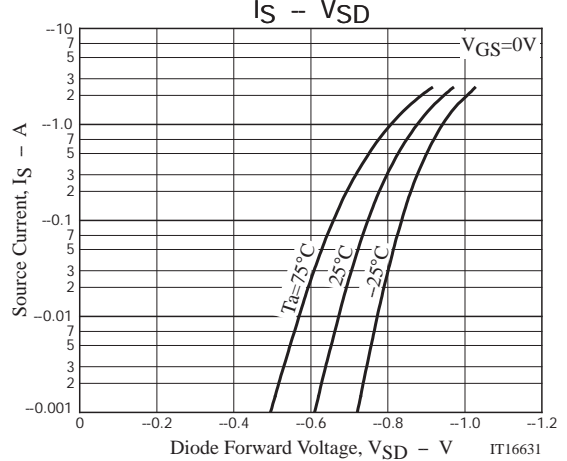
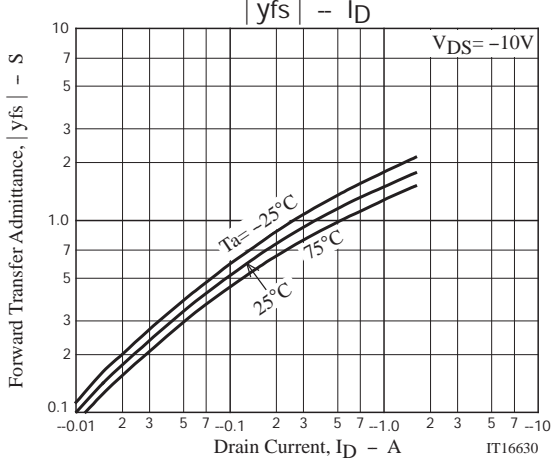
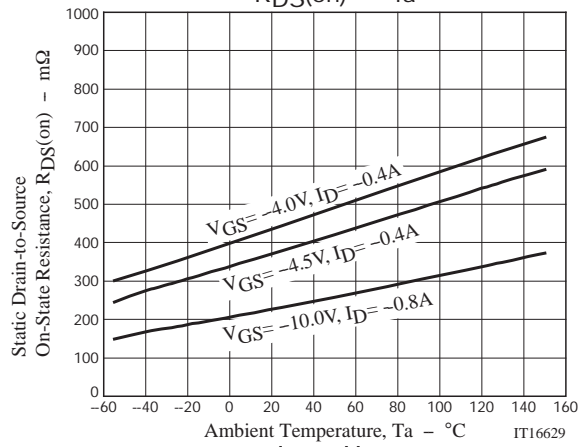
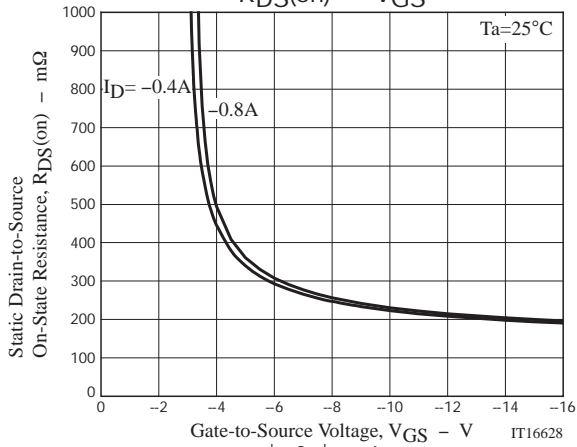
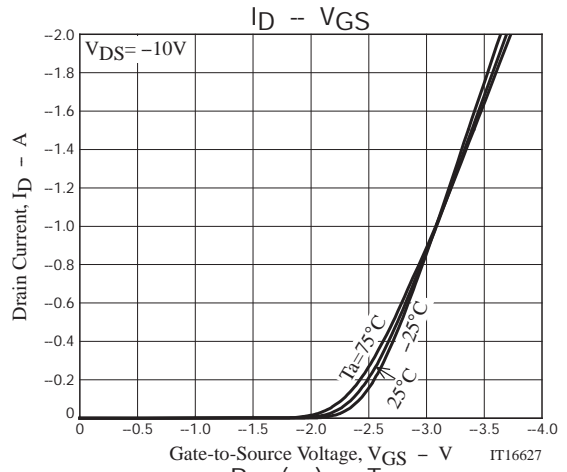
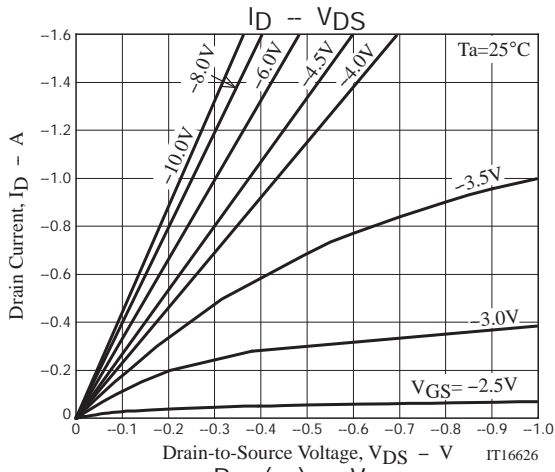
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--|----------------------|---|-----------------------------|------|------|------|
| | | | min | typ | max | |
| Drain-to-Source Breakdown Voltage | V(BR)DSS | I _D =-1mA, V _{GS} =0V | -30 | | | V |
| Zero-Gate Voltage Drain Current | I _{DSS} | 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 =-0.8A | | 1.3 | | S |
| Static Drain-to-Source On-State Resistance | R _{DS(on)1} | I _D =-0.8A, V _{GS} =-10V | | 233 | 303 | mΩ |
| | R _{DS(on)2} | I _D =-0.4A, V _{GS} =-4.5V | | 380 | 532 | mΩ |
| | R _{DS(on)3} | I _D =-0.4A, V _{GS} =-4V | | 441 | 617 | mΩ |
| Input Capacitance | C _{iss} | V _{DS} =-10V, f=1MHz | | 82 | | pF |
| Output Capacitance | C _{oss} | | | 22 | | pF |
| Reverse Transfer Capacitance | C _{rss} | | | 16 | | pF |
| Turn-ON Delay Time | t _{d(on)} | | See specified Test Circuit. | | 4.0 | |
| Rise Time | t _r | | | 3.3 | | ns |
| Turn-OFF Delay Time | t _{d(off)} | | | 12 | | ns |
| Fall Time | t _f | | | 5.4 | | ns |
| Total Gate Charge | Q _g | V _{DS} =-15V, V _{GS} =-10V, I _D =-1.6A | | | 2.2 | |
| Gate-to-Source Charge | Q _{gs} | | | 0.36 | | nC |
| Gate-to-Drain "Miller" Charge | Q _{gd} | | | 0.49 | | nC |
| Diode Forward Voltage | V _{SD} | I _S =-1.6A, V _{GS} =0V | | -0.9 | -1.5 | V |

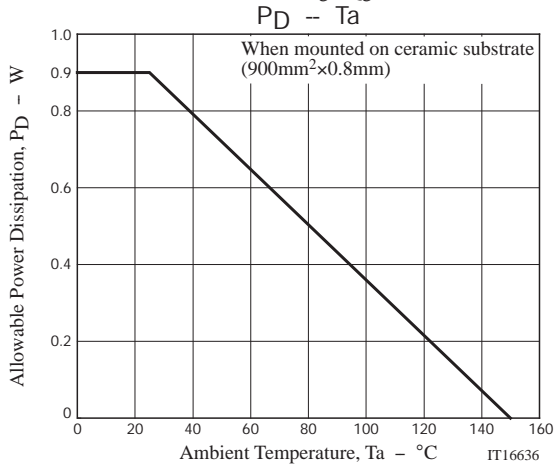
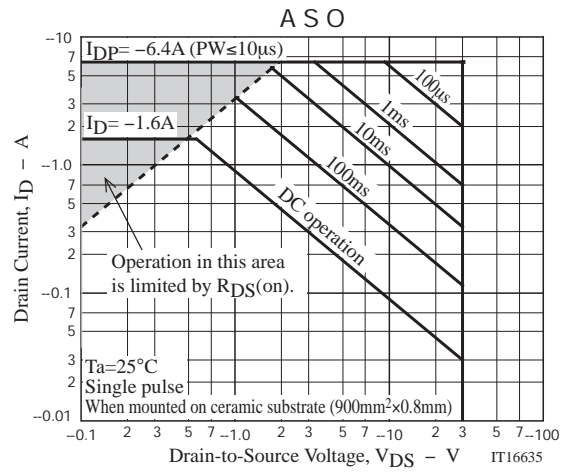
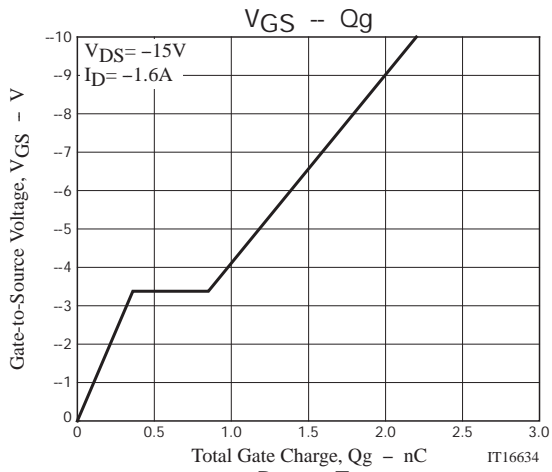
Switching Time Test Circuit



Ordering Information

| Device | Package | Shipping | memo |
|--------------|---------|----------------|--------------------------|
| CPH3360-TL-H | CPH3 | 3,000pcs./reel | Pb Free and Halogen Free |

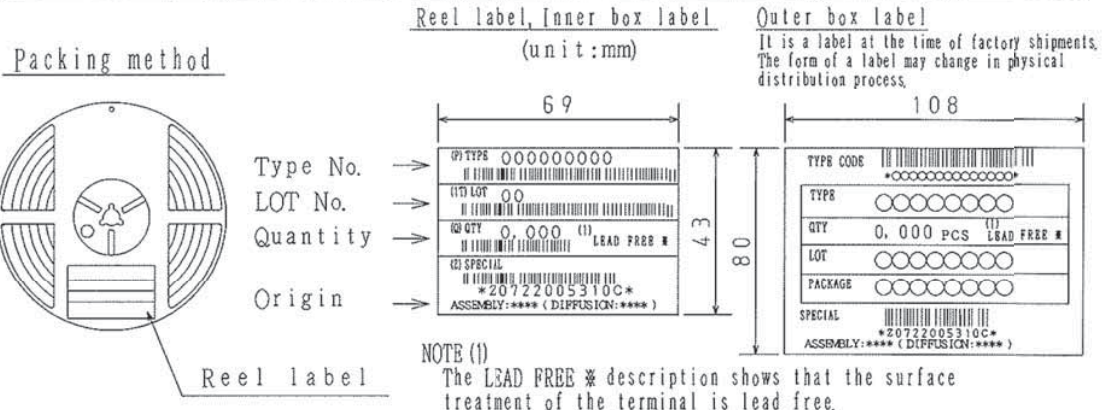




Embossed Taping Specification
CPH3360-TL-H

1. Packing Format

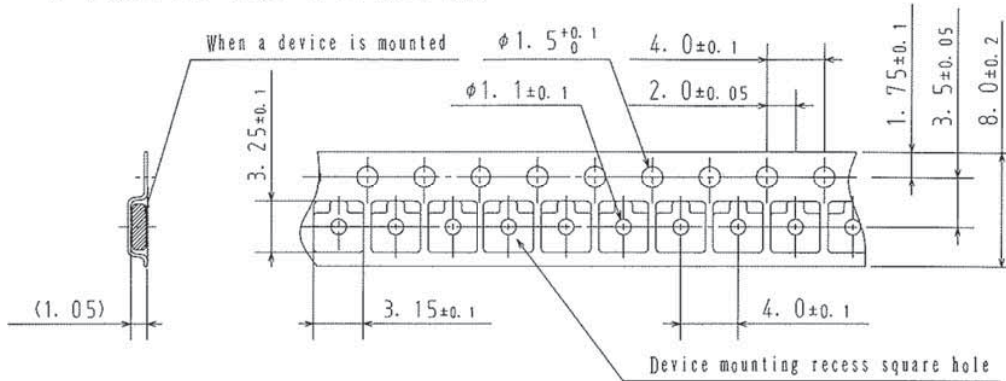
| Package Name | Carrier Tape Type | Maximum Number of devices contained (pcs) | | | Packing format | |
|--------------|-------------------|---|-----------|-----------|---|--|
| | | Reel | Inner box | Outer box | Inner BOX (C-1) | Outer BOX (A-7) |
| CPH3 | CPH3 | 3,000 | 15,000 | 90,000 | 5 reels contained Dimensions:mm (external) 183×72×185 | 6 inner boxes contained Dimensions:mm (external) 440×195×210 |



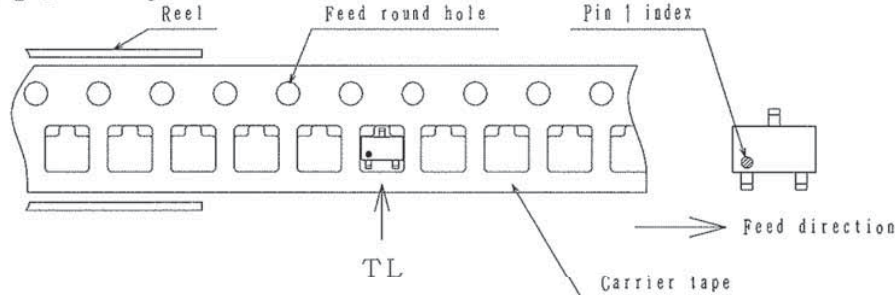
| Label | JEITA Phase |
|-------------|----------------|
| LEAD FREE 3 | JEITA Phase 3A |
| LEAD FREE 4 | JEITA Phase 3 |

2. Taping configuration

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



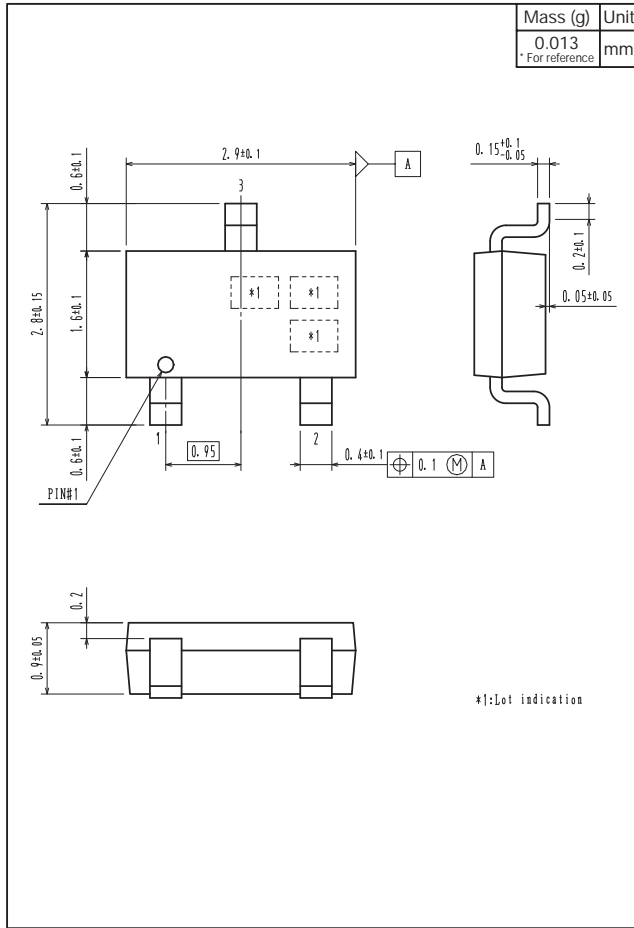
2-2. Device placement direction



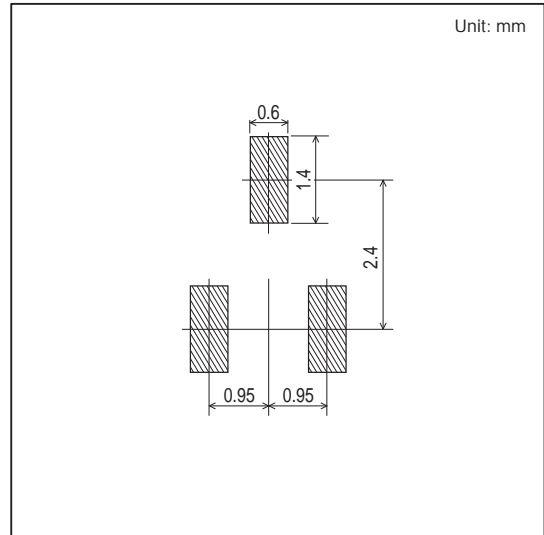
Those with one electrode terminal on the feed hole side.....TL

CPH3360

Outline Drawing CPH3360-TL-H



Land Pattern Example



Note on usage : Since the CPH3360 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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