



MCH3375 — P-Channel Silicon MOSFET

General-Purpose Switching Device Applications

Features

- ON-resistance $R_{DS(on)1}=227m\Omega$ (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 (900mm ² x0.8mm)	0.8	W
Channel Temperature	T_{ch}		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to +150	$^\circ C$

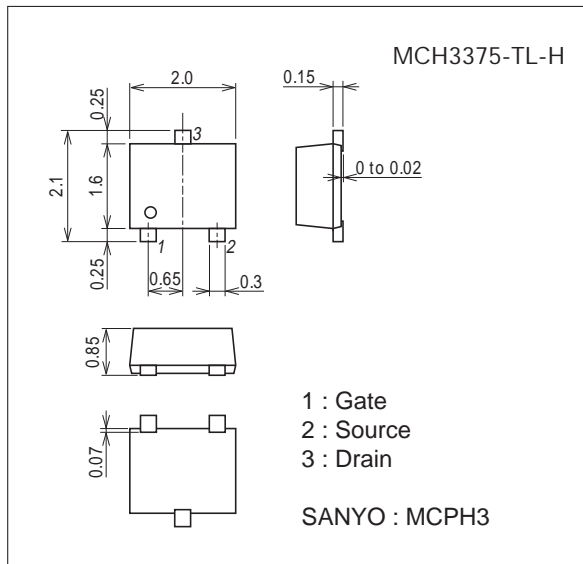
This product is designed to "ESD immunity < 200V**", so please take care when handling.

* Machine Model

Package Dimensions

unit : mm (typ)

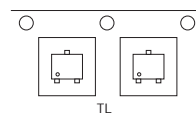
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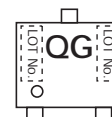
Product & Package Information

- Package : MCPH3
- JEITA, JEDEC : SC-70, SOT-323
- Minimum Packing Quantity : 3,000 pcs./reel

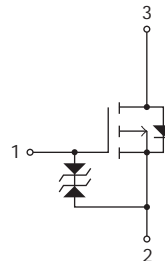
Packing Type: TL



Marking



Electrical Connection

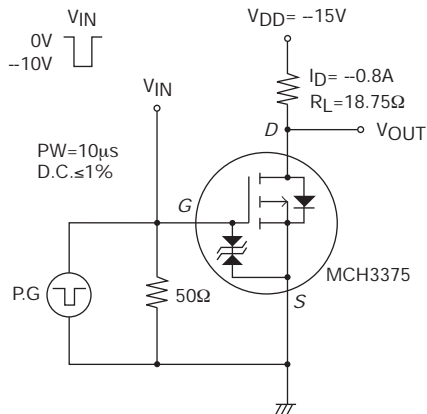


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Electrical Characteristics at Ta=25°C

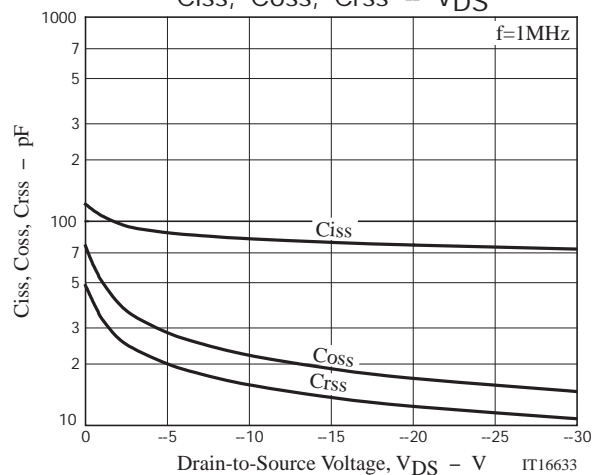
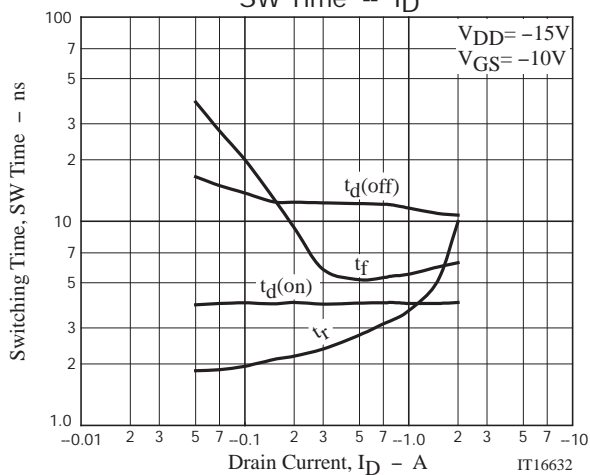
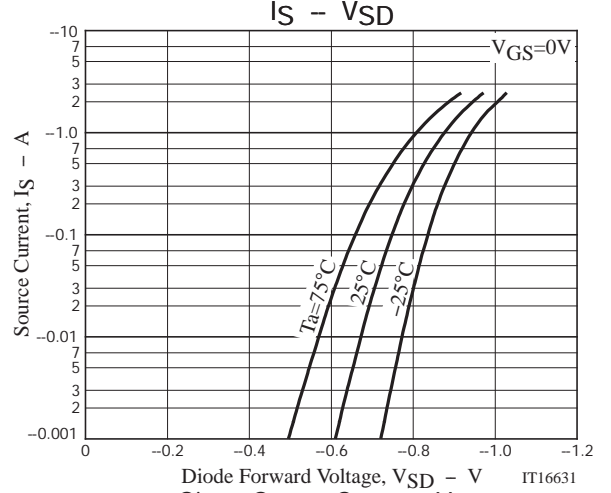
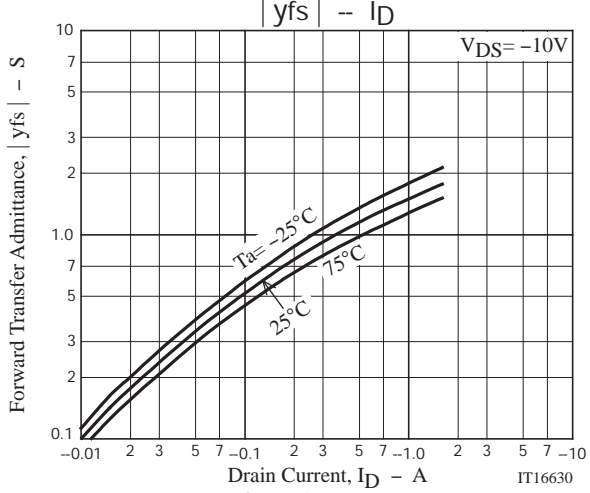
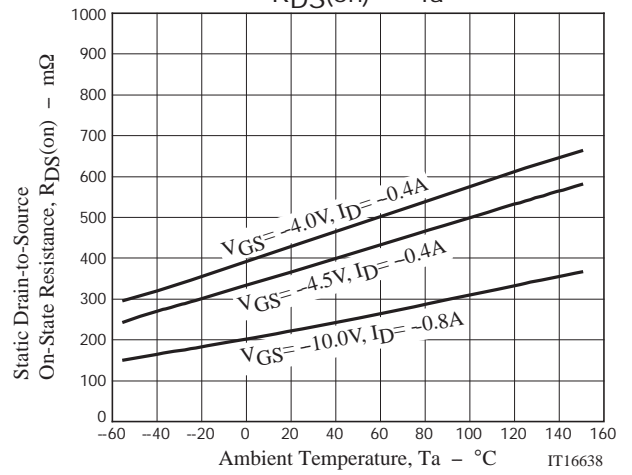
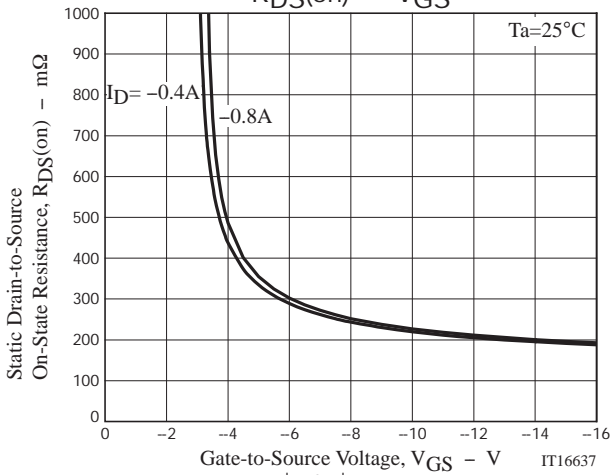
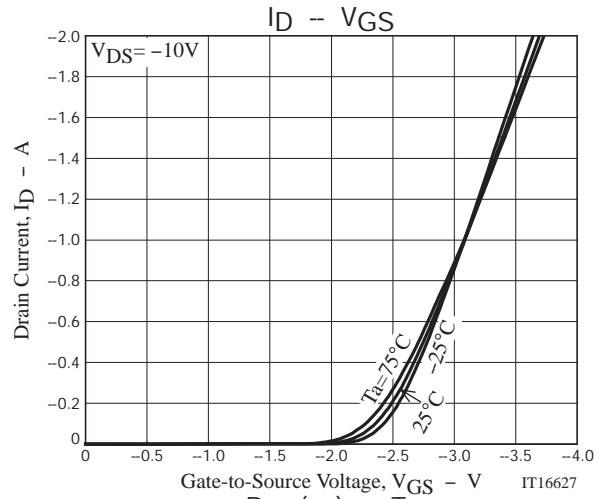
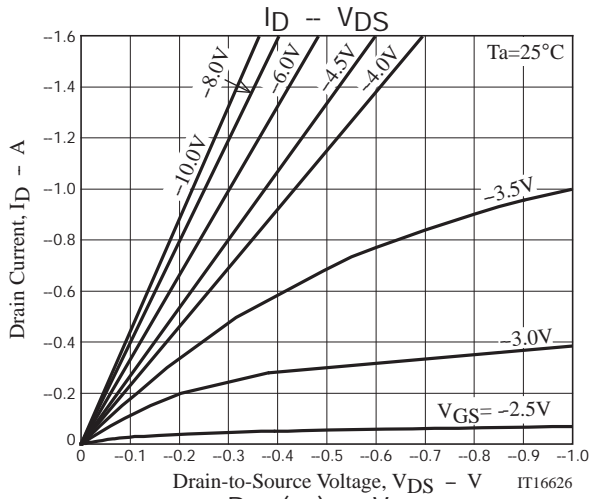
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=-1mA, VGS=0V	-30			V
Zero-Gate Voltage Drain Current	IDSS	VDS=-30V, VGS=0V			-1	μA
Gate-to-Source Leakage Current	IGSS	VGS=±16V, VDS=0V			±10	μA
Cutoff Voltage	VGS(off)	VDS=-10V, ID=-1mA	-1.2		-2.6	V
Forward Transfer Admittance	yfs	VDS=-10V, ID=-0.8A		1.3		S
Static Drain-to-Source On-State Resistance	RDS(on)1	ID=-0.8A, VGS=-10V		227	295	mΩ
	RDS(on)2	ID=-0.4A, VGS=-4.5V		374	523	mΩ
	RDS(on)3	ID=-0.4A, VGS=-4V		435	609	mΩ
Input Capacitance	Ciss			82		pF
Output Capacitance	Coss	VDS=-10V, f=1MHz		22		pF
Reverse Transfer Capacitance	Crss			16		pF
Turn-ON Delay Time	td(on)	See specified Test Circuit.		4.0		ns
Rise Time	tr			3.3		ns
Turn-OFF Delay Time	td(off)			12		ns
Fall Time	tf			5.4		ns
Total Gate Charge	Qg				2.2	
Gate-to-Source Charge	Qgs	VDS=-15V, VGS=-10V, ID=-1.6A		0.36		nC
Gate-to-Drain "Miller" Charge	Qgd			0.49		nC
Diode Forward Voltage	VSD		IS=-1.6A, VGS=0V		-0.9	-1.5

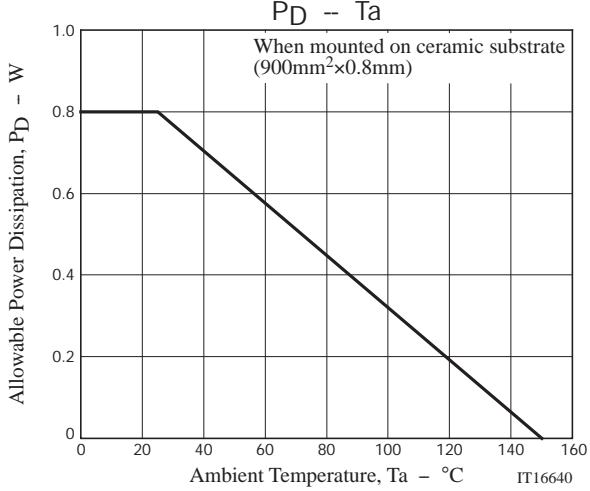
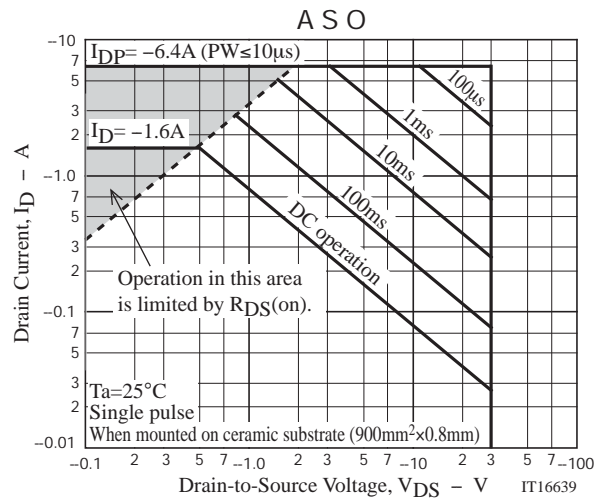
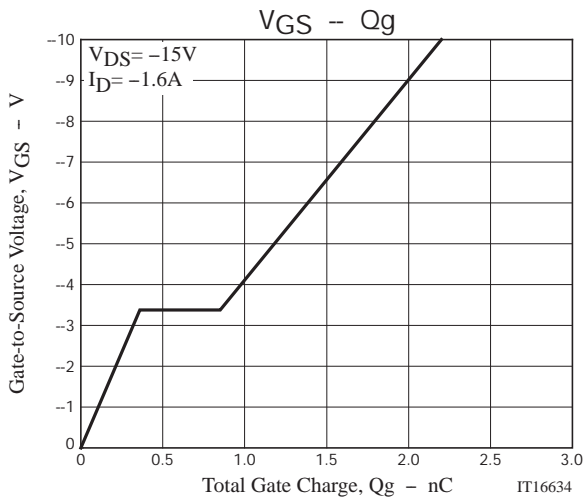
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
MCH3375-TL-H	MCPH3	3,000pcs./reel	Pb Free and Halogen Free





MCH3375

Taping Specification

MCH3375-TL-H

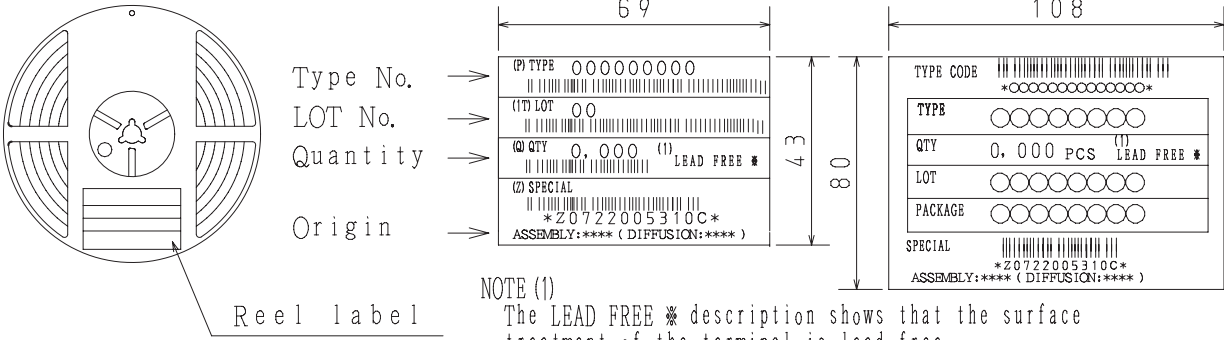
1. Packing Format

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)
MCPH3	MCPH3	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

Packing method

Reel label, Inner box label (unit: mm) Outer box label

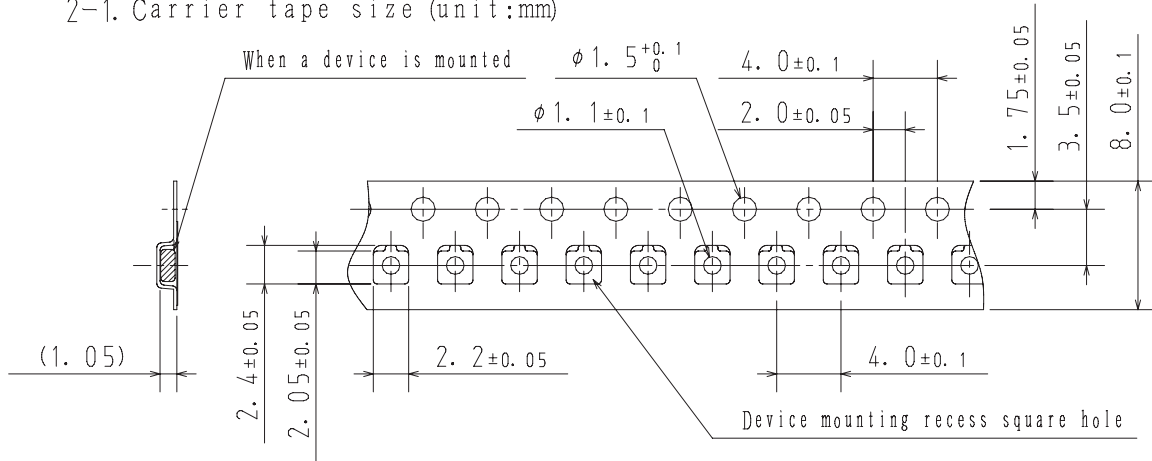
It is a label at the time of factory shipments.
The form of a label may change in physical distribution process.



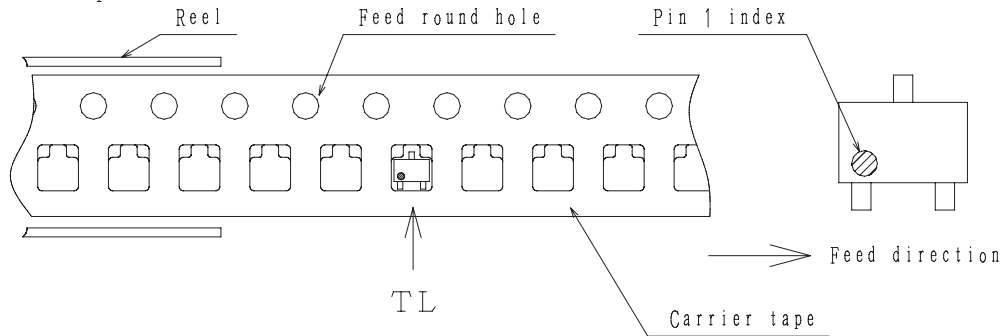
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



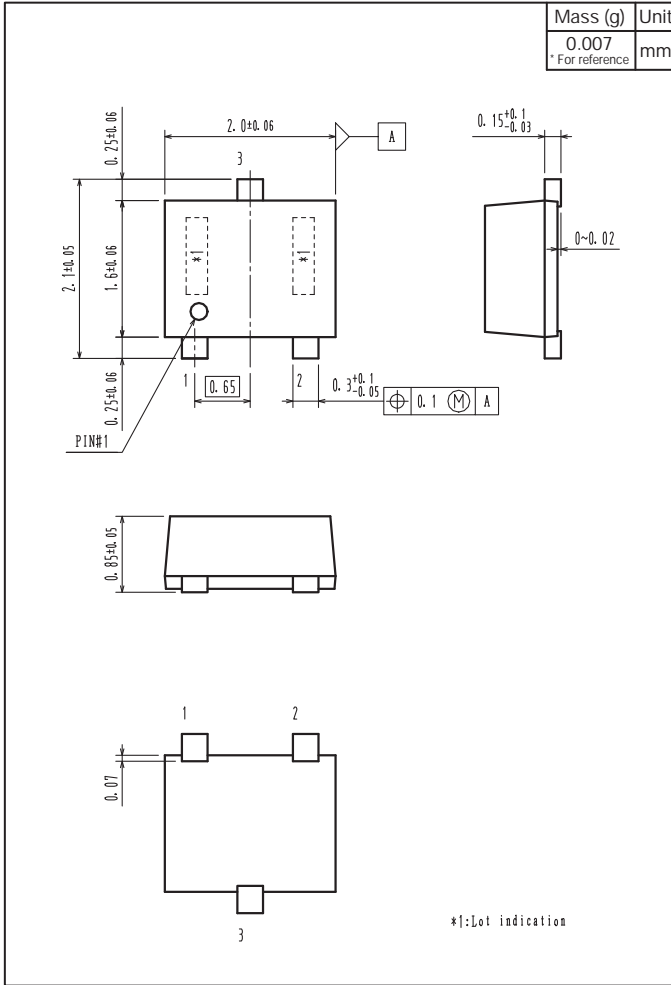
2-2. Device placement direction



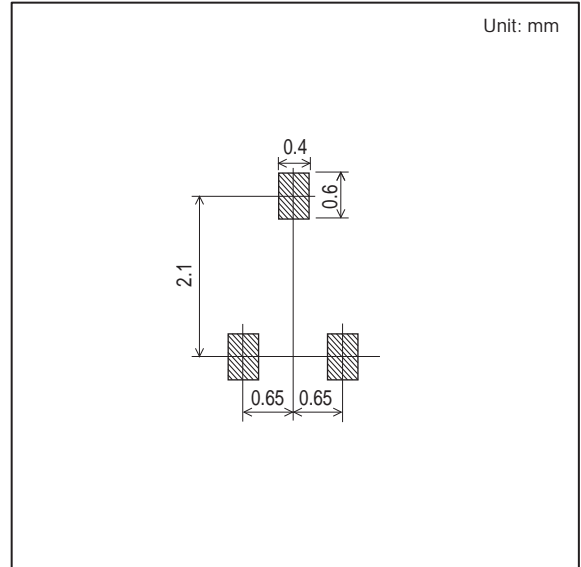
Those with pin 1 index on the feed hole side.....TL

MCH3375

Outline Drawing MCH3375-TL-H



Land Pattern Example



Note on usage : Since the MCH3375 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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