



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

N-Channel Silicon MOSFET

MCH3475 — General-Purpose Switching Device Applications

Features

- Ultrahigh speed switching
- 4V drive

Specifications

Absolute Maximum Ratings at Ta=25°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≤10μs, duty cycle≤1%	7.2	A
Allowable Power Dissipation	P _D	When mounted on ceramic substrate (900mm ² ×0.8mm)	0.8	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

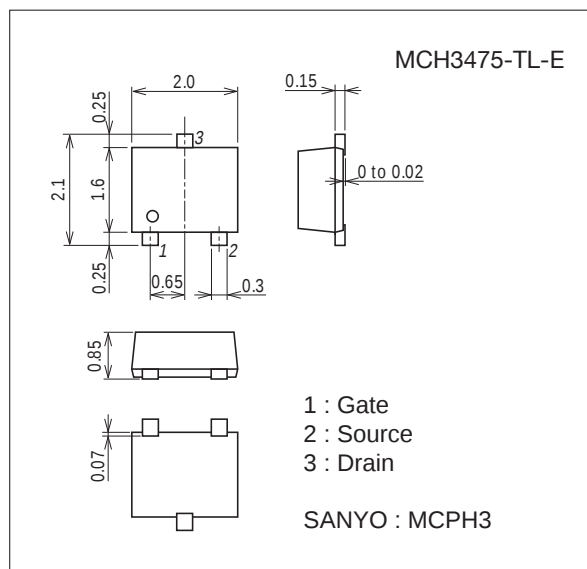
This product is designed to "ESD immunity < 200V**", so please take care when handling.

* Machine Model

Package Dimensions

unit : mm (typ)

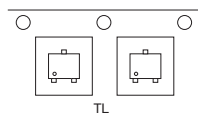
7019A-003



Product & Package Information

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

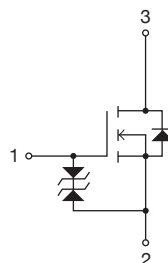
Packing Type : TL



Marking



Electrical Connection

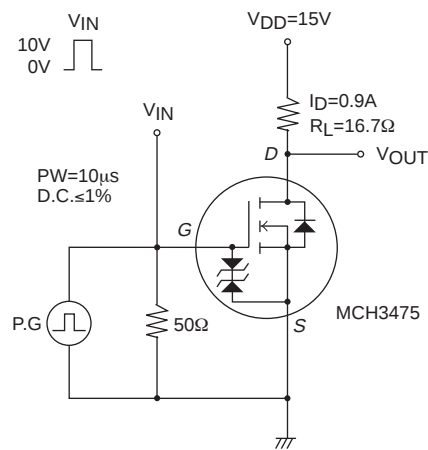


MCH3475

Electrical Characteristics at Ta=25°C

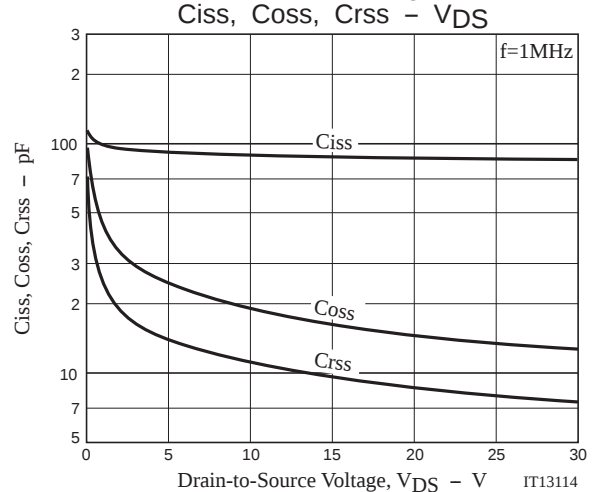
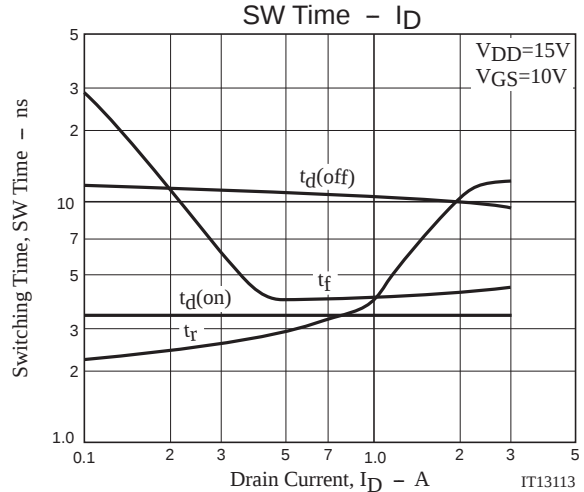
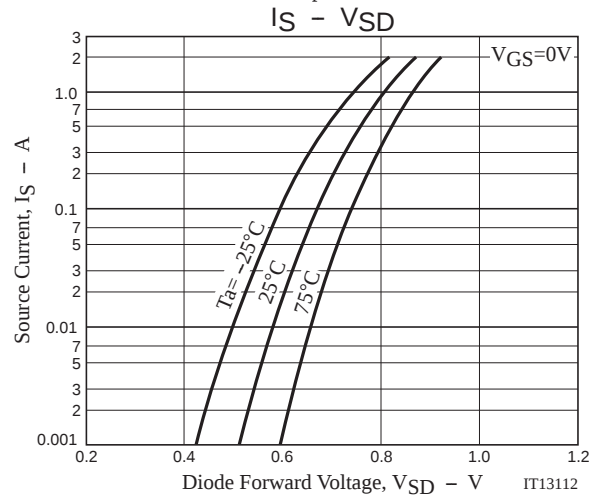
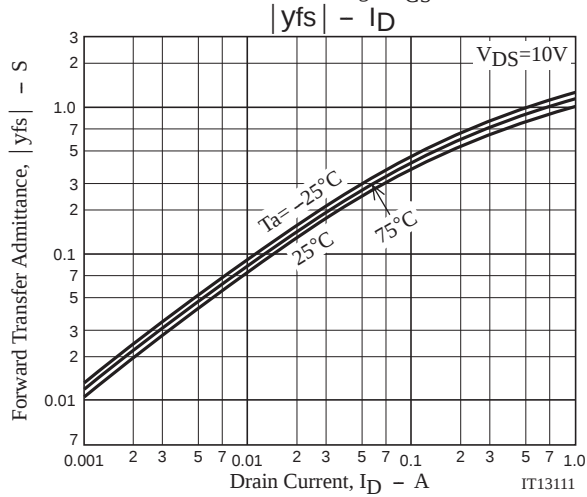
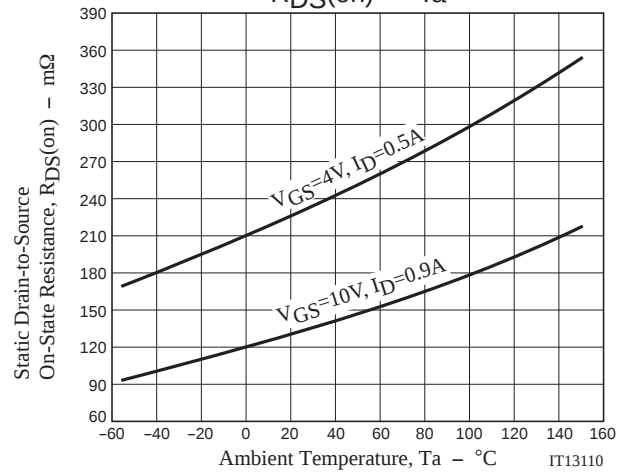
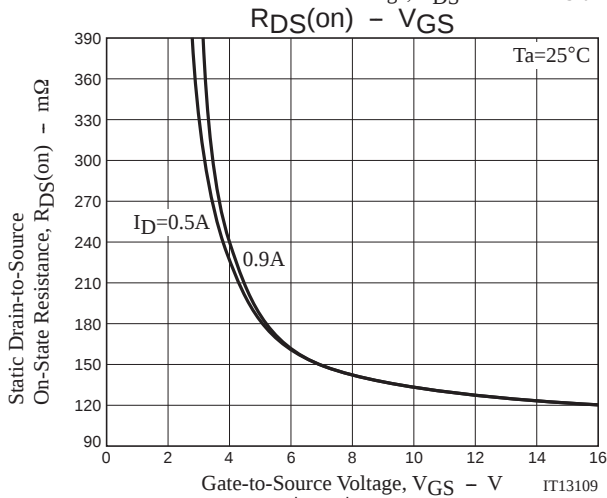
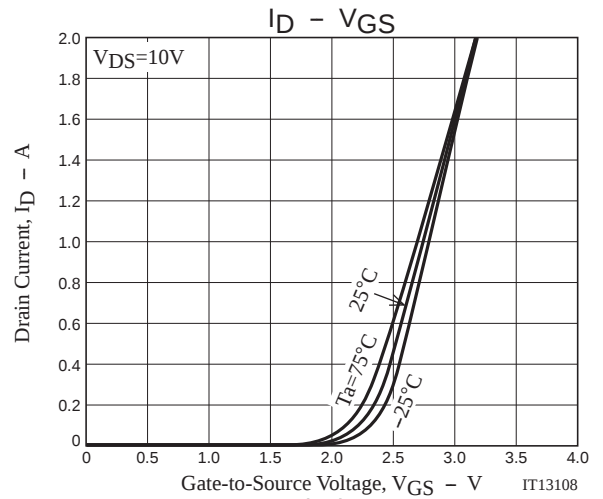
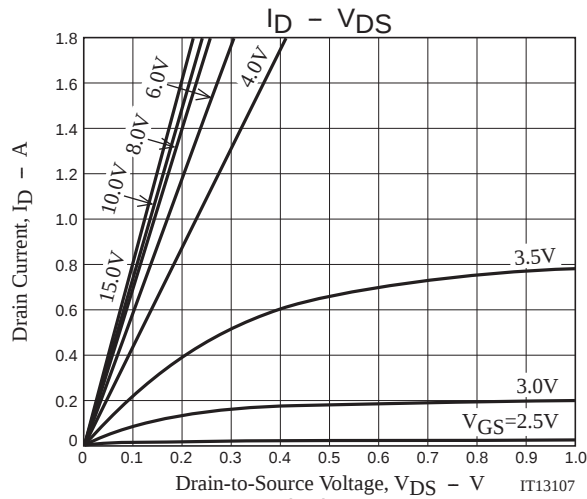
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	30			V
Zero-Gate Voltage Drain Current	IDSS	VDS=30V, VGS=0V			1	μA
Gate-to-Source Leakage Current	IGSS	VGS=±16V, VDS=0V			±10	μA
Cutoff Voltage	VGS(off)	VDS=10V, ID=1mA	1.2		2.6	V
Forward Transfer Admittance	yfs	VDS=10V, ID=0.9A	0.66	1.1		S
Static Drain-to-Source On-State Resistance	RDS(on)1	ID=0.9A, VGS=10V		135	180	mΩ
	RDS(on)2	ID=0.5A, VGS=4V		230	330	mΩ
Input Capacitance	Ciss	VDS=10V, f=1MHz		88		pF
Output Capacitance	Coss			19		pF
Reverse Transfer Capacitance	Crss			11		pF
Turn-ON Delay Time	td(on)	See specified Test Circuit.		3.4		ns
Rise Time	tr			3.6		ns
Turn-OFF Delay Time	td(off)			10.5		ns
Fall Time	tf			4.0		ns
Total Gate Charge	Qg	VDS=10V, VGS=10V, ID=1.8A		2.0		nC
Gate-to-Source Charge	Qgs			0.33		nC
Gate-to-Drain "Miller" Charge	Qgd			0.29		nC
Diode Forward Voltage	VSD	IS=1.8A, VGS=0V		0.86	1.2	V

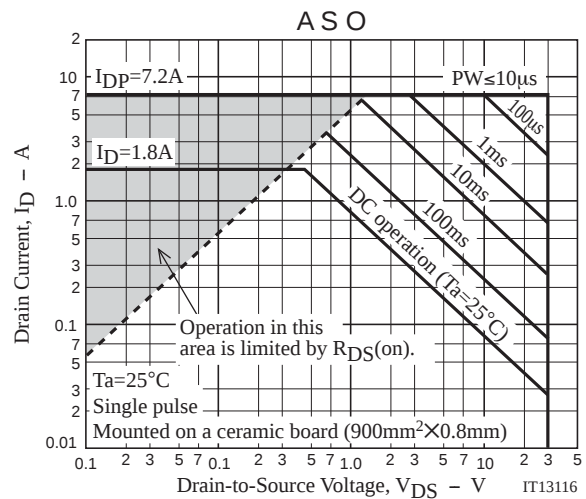
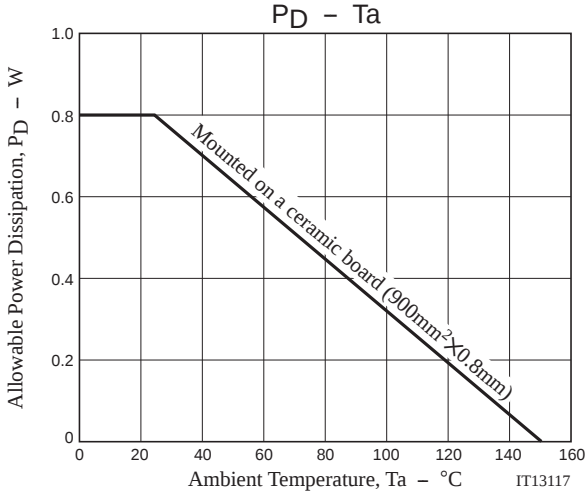
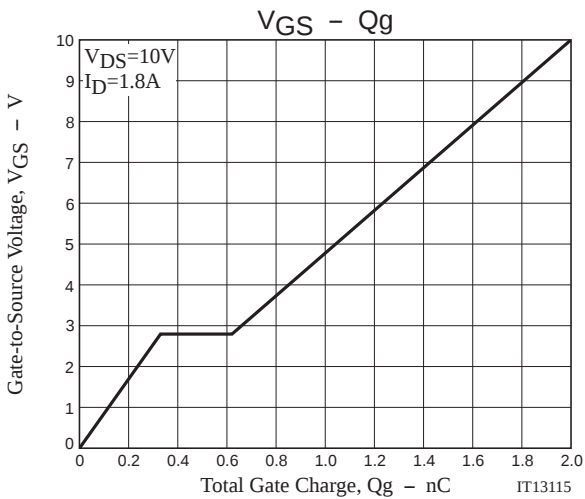
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
MCH3475-TL-E	MCPH3	3,000pcs./reel	Pb Free





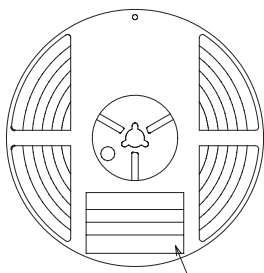
Taping Specification

MCH3475-TL-E

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



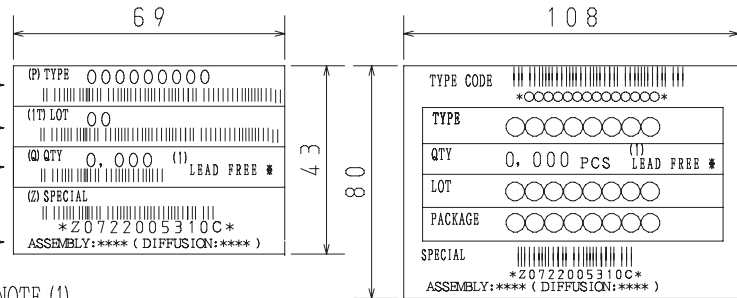
Type No.
LOT No.
Quantity
Origin

Reel label

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.



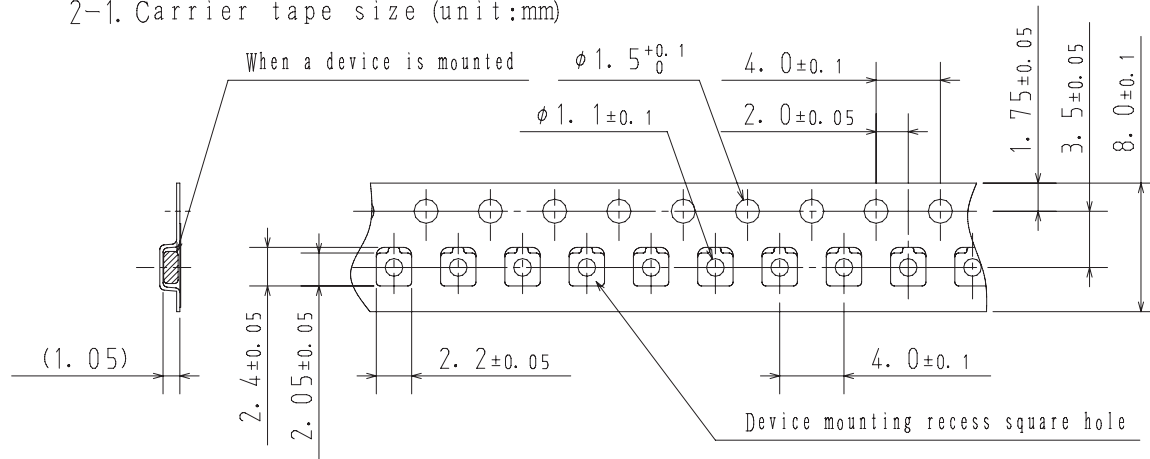
NOTE (1)

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

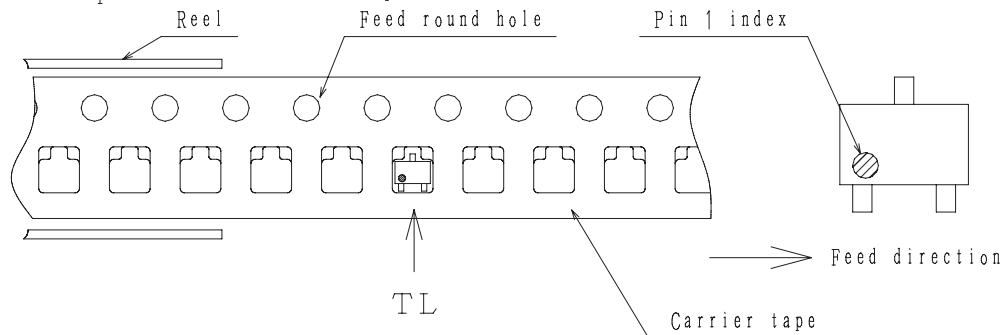
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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

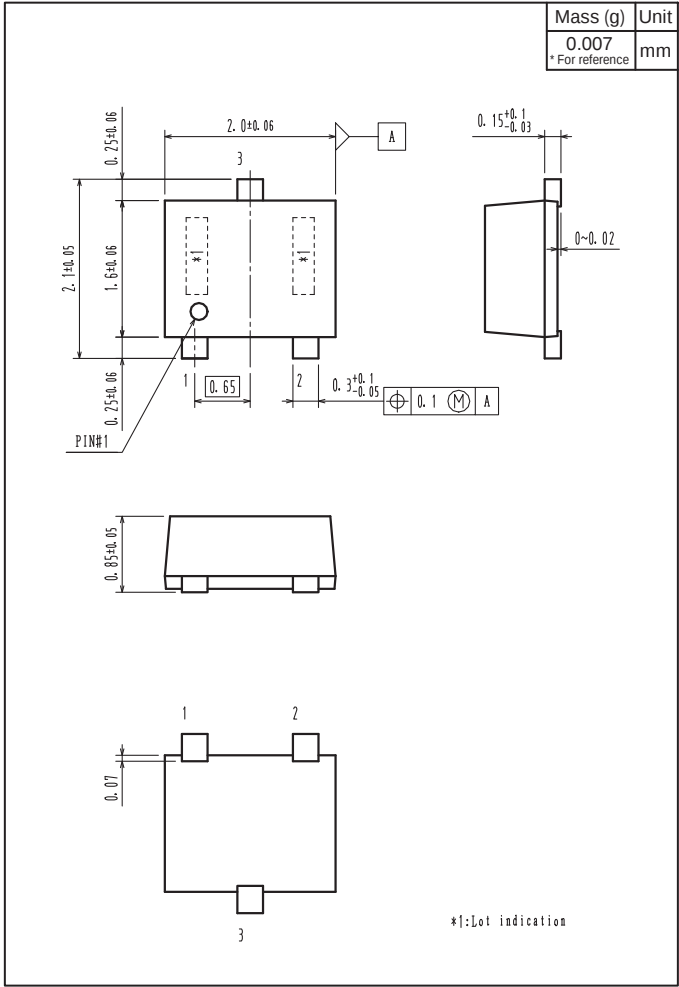


2-2. Device placement direction

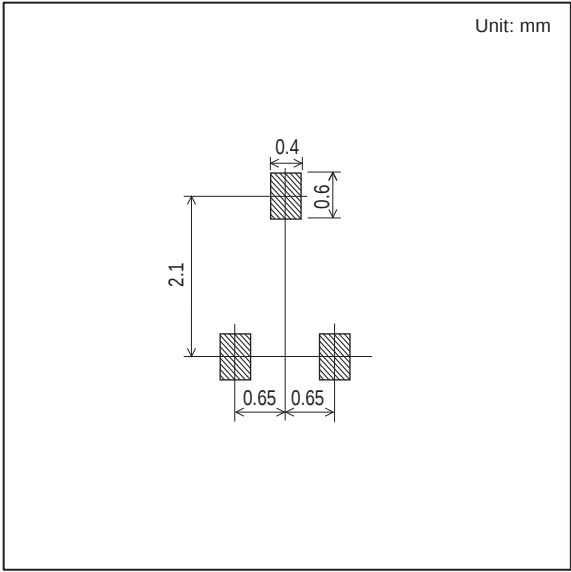


Those with pin 1 index on the feed hole side.....TL

Outline Drawing
MCH3475-TL-E



Land Pattern Example



Note on usage : Since the MCH3475 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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Телефон: +7 812 627 14 35

Электронная почта: sales@st-electron.ru

Адрес: 198099, Санкт-Петербург,
Промышленная ул, дом № 19, литера Н,
помещение 100-Н Офис 331