



SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company

CPH6354 — P-Channel Silicon MOSFET General-Purpose Switching Device Applications

Features

- ON-resistance $R_{DS(on)} = 77\text{m}\Omega$ (typ.)
- 4V drive
- Halogen free compliance
- Protection diode in

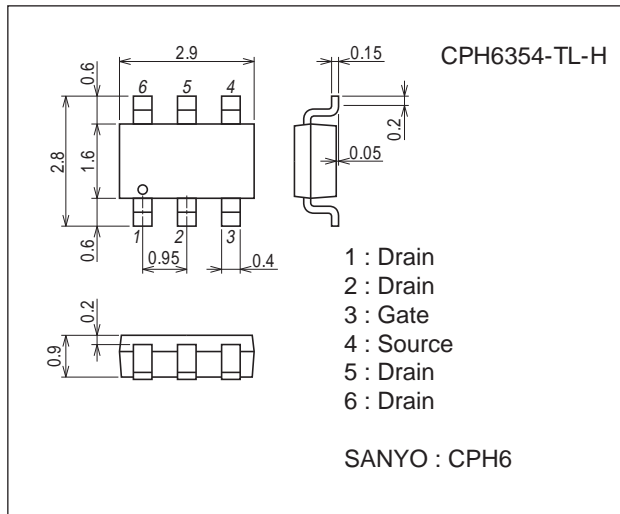
Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	V_{DSS}		-60	V
Gate-to-Source Voltage	V_{GSS}		± 20	V
Drain Current (DC)	I_D		-4	A
Drain Current (Pulse)	I_{DP}	$PW \leq 10\mu\text{s}$, duty cycle $\leq 1\%$	-16	A
Allowable Power Dissipation	P_D	When mounted on ceramic substrate (1500mm ² × 0.8mm)	1.6	W
Channel Temperature	T_{ch}		150	$^\circ\text{C}$
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$

Package Dimensions

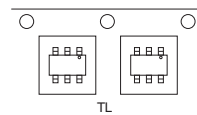
unit : mm (typ)
7018A-003



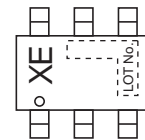
Product & Package Information

- Package : CPH6
- JEITA, JEDEC : SC-74, SOT-26, SOT-457
- Minimum Packing Quantity : 3,000 pcs./reel

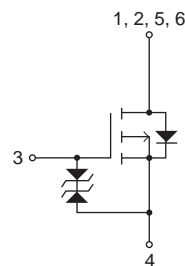
Packing Type: TL



Marking



Electrical Connection

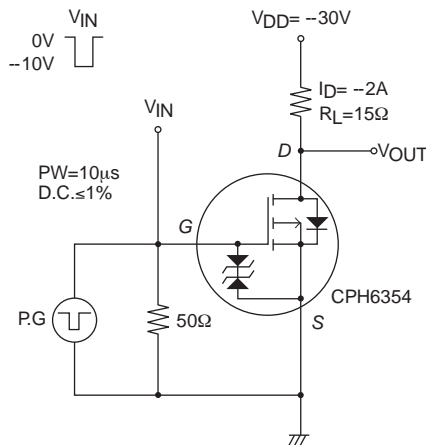


CPH6354

Electrical Characteristics at Ta=25°C

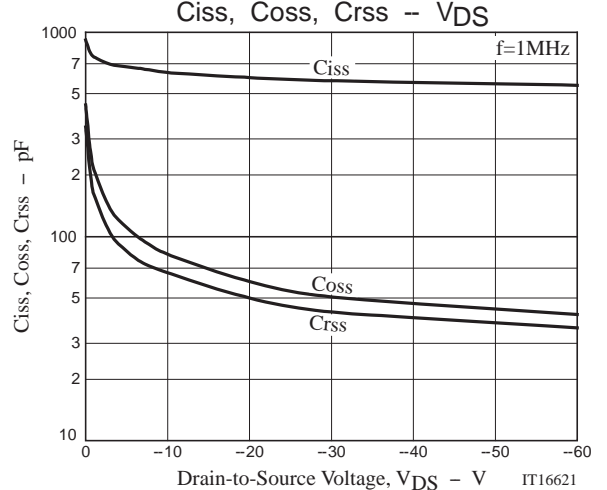
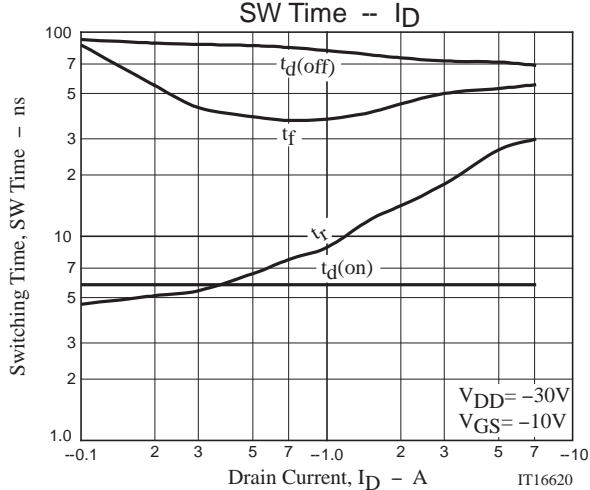
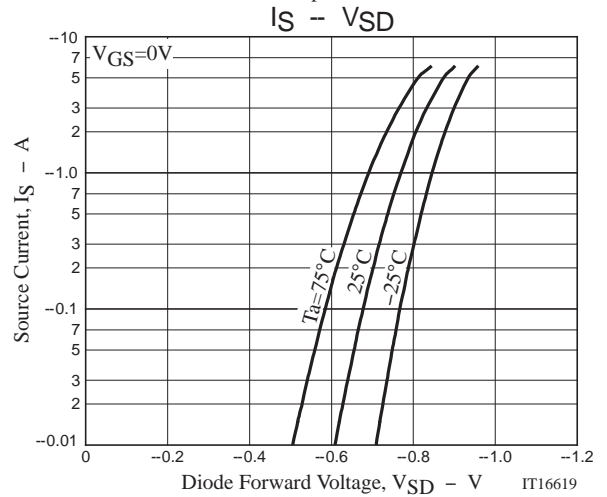
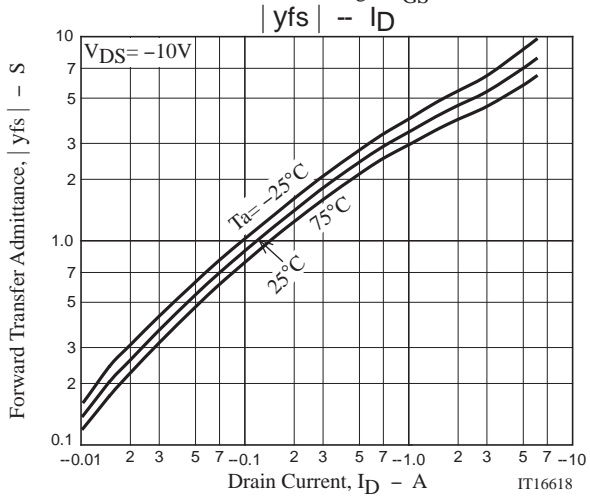
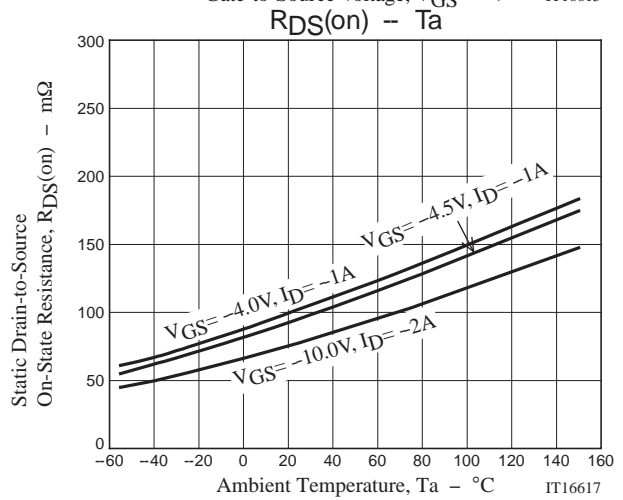
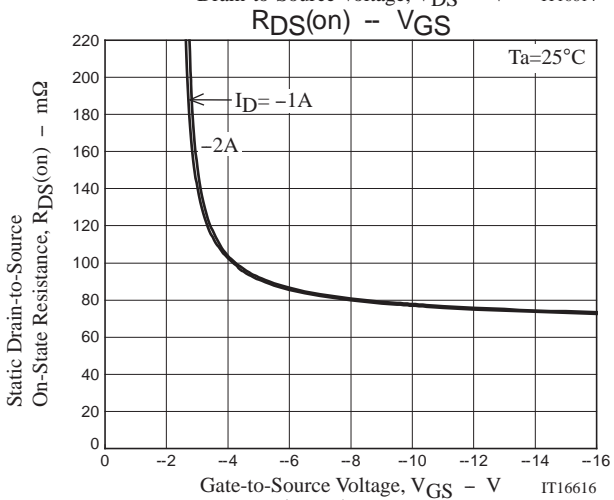
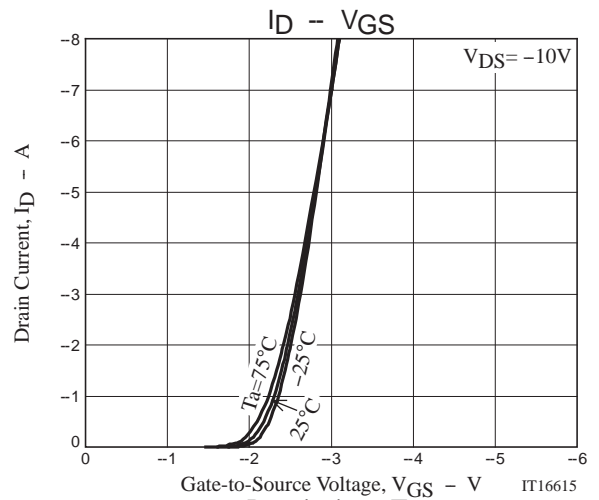
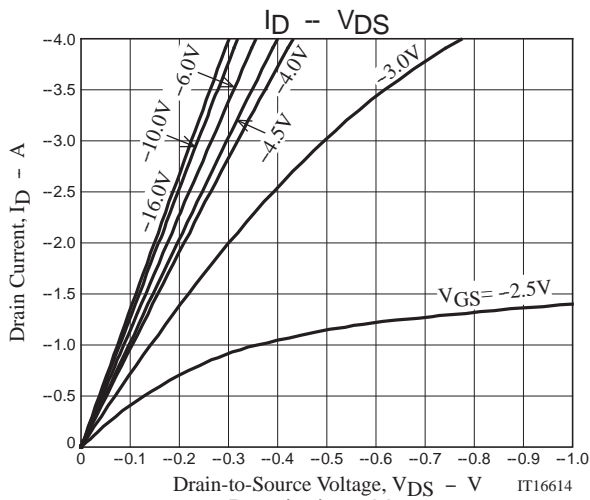
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =-1mA, V _{GS} =0V	-60			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =-60V, V _{GS} =0V			-1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±16V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =-10V, I _D =-1mA	-1.2		-2.6	V
Forward Transfer Admittance	y _{fs}	V _{DS} =-10V, I _D =-2A		4.8		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =-2A, V _{GS} =-10V		77	100	mΩ
	R _{DS(on)2}	I _D =-1A, V _{GS} =-4.5V		96	135	mΩ
	R _{DS(on)3}	I _D =-1A, V _{GS} =-4V		103	145	mΩ
Input Capacitance	C _{iss}			600		pF
Output Capacitance	C _{oss}	V _{DS} =-20V, f=1MHz		60		pF
Reverse Transfer Capacitance	C _{rss}			50		pF
Turn-ON Delay Time	t _{d(on)}	See specified Test Circuit.		5.8		ns
Rise Time	t _r			12		ns
Turn-OFF Delay Time	t _{d(off)}			78		ns
Fall Time	t _f			40		ns
Total Gate Charge	Q _g			14		nC
Gate-to-Source Charge	Q _{gs}	V _{DS} =-30V, V _{GS} =-10V, I _D =-4A		1.6		nC
Gate-to-Drain "Miller" Charge	Q _{gd}			3.4		nC
Diode Forward Voltage	V _{SD}	I _S =-4A, V _{GS} =0V		-0.84	-1.2	V

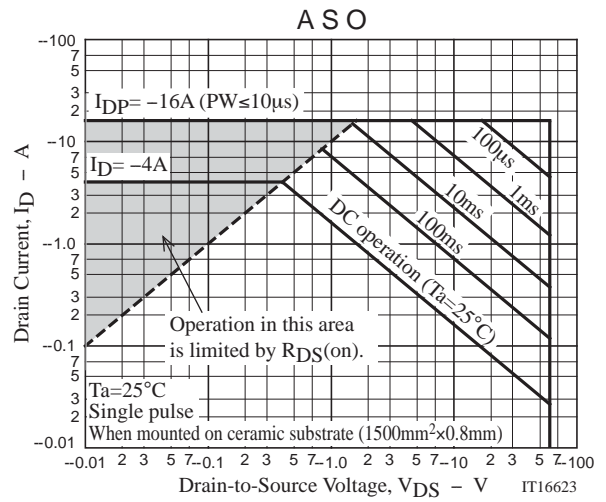
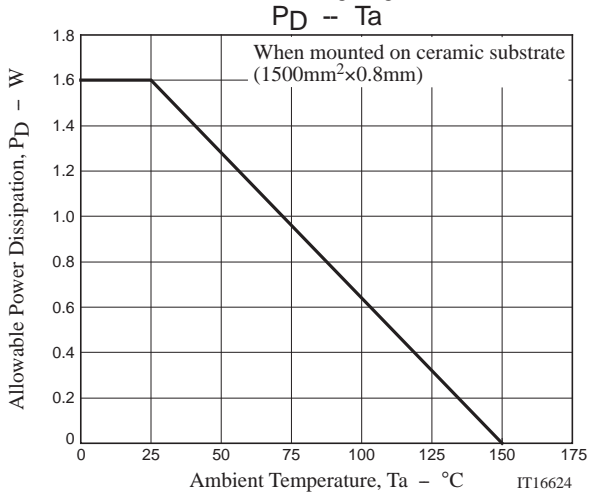
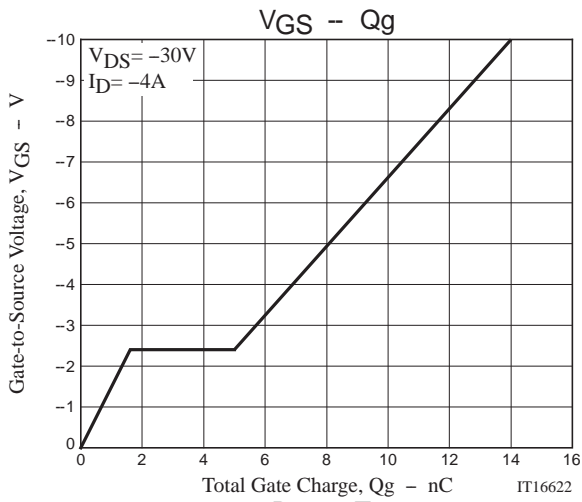
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
CPH6354-TL-H	CPH6	3,000pcs./reel	Pb Free and Halogen Free





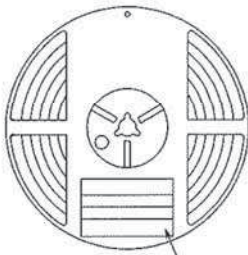
Embossed Taping Specification

CPH6354-TL-H

1. Packing Format

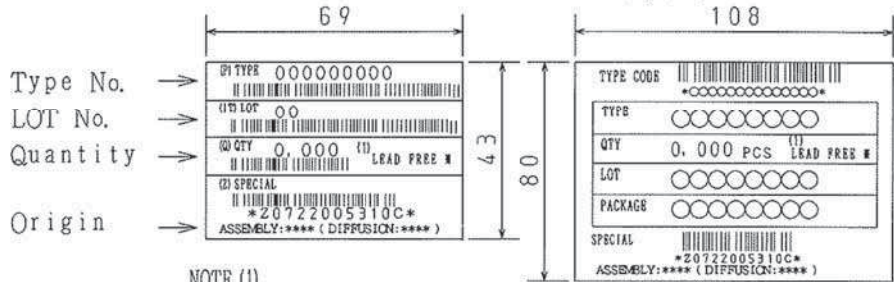
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
CPH6	CPH6	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

Packing method



Reel label

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.



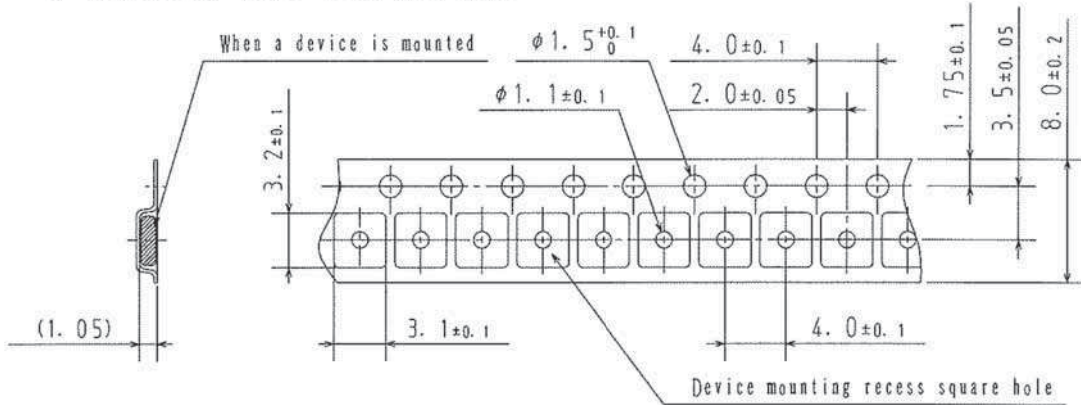
NOTE (1)

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

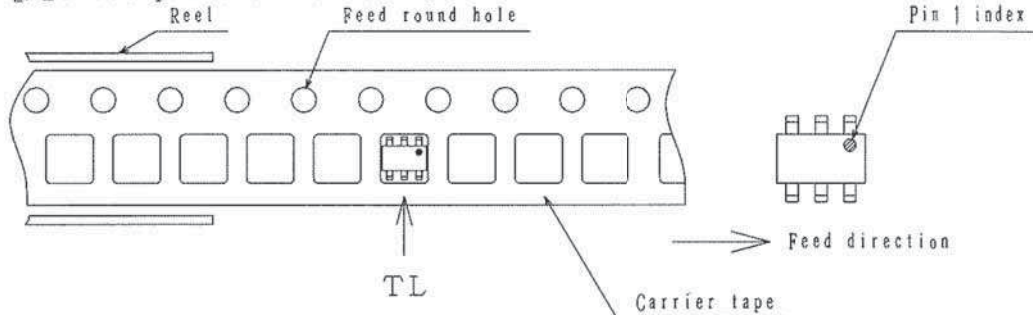
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



2-2. Device placement direction

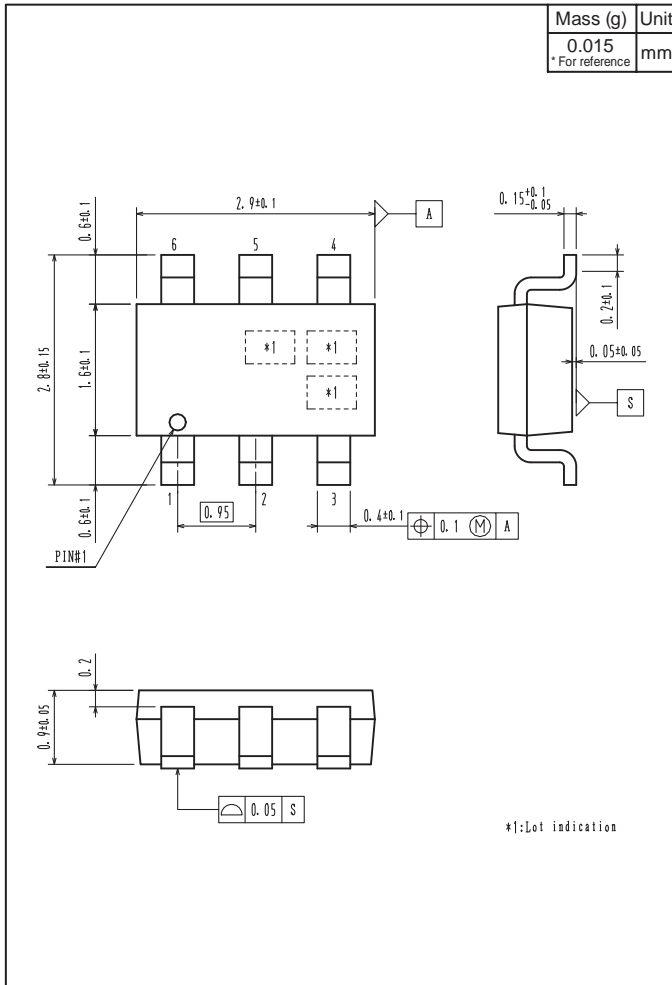


Those with pin 1 index on the feed hole side.....TL

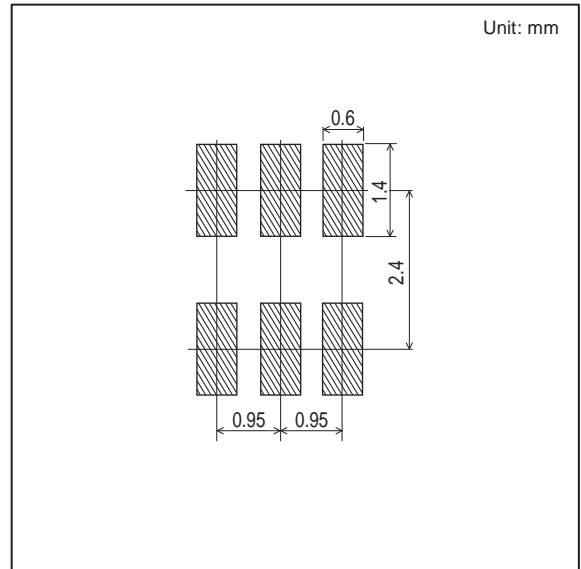
CPH6354

Outline Drawing

CPH6354-TL-H



Land Pattern Example



Note on usage : Since the CPH6354 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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