



CPH6444 — General-Purpose Switching Device Applications

N-Channel Silicon MOSFET

Features

- Low ON-resistance
- 4V drive

Specifications

Absolute Maximum Ratings at Ta=25°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		4.5	A
Drain Current (Pulse)	I _{DP}	PW≤10μs, duty cycle≤1%	18	A
Allowable Power Dissipation	P _D	When mounted on ceramic substrate (900mm ² ×0.8mm)	1.6	W
Channel Temperature	T _{ch}		150	°C
Storage Temperature	T _{stg}		-55 to +150	°C

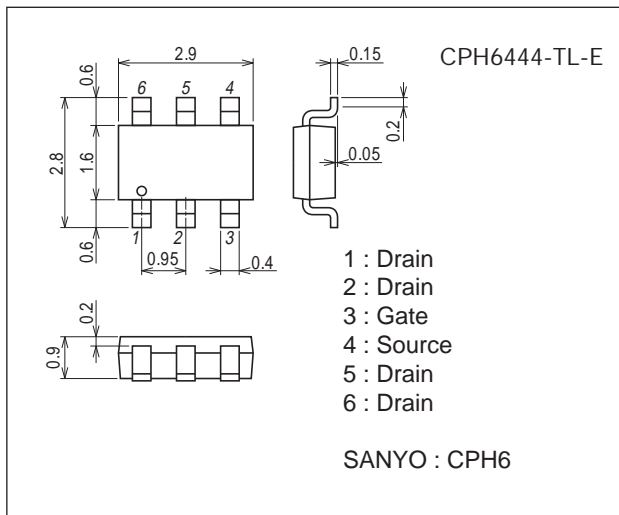
This product is designed to "ESD immunity < 200V**", so please take care when handling.

* Machine Model

Package Dimensions

unit : mm (typ)

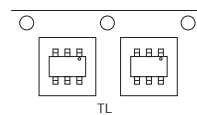
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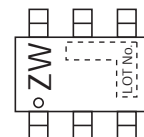
Product & Package Information

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

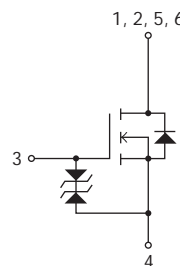
Packing Type: TL



Marking



Electrical Connection

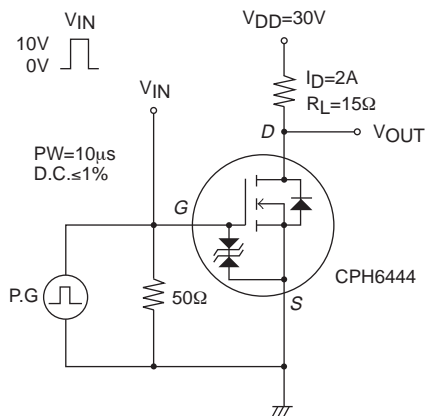


CPH6444

Electrical Characteristics at Ta=25°C

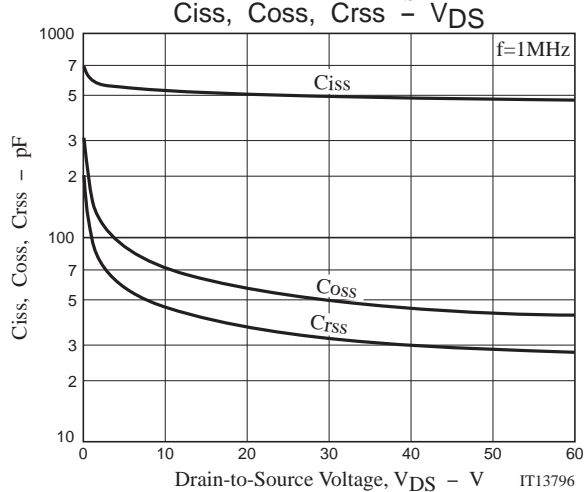
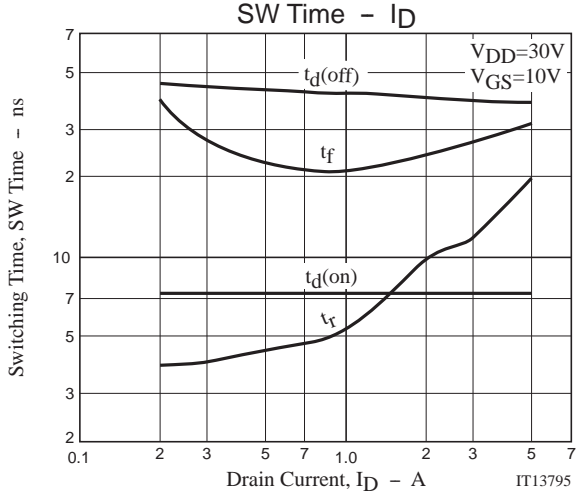
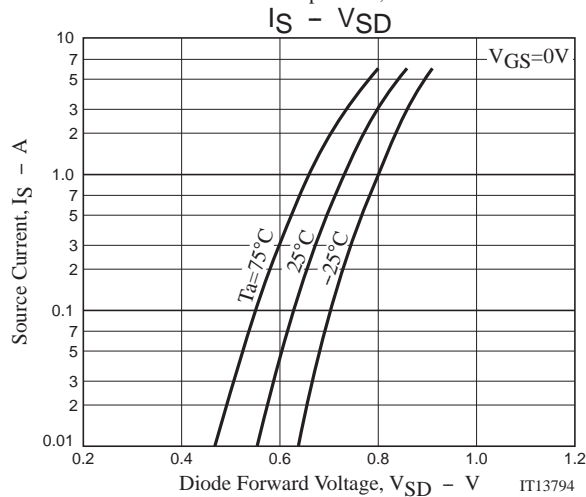
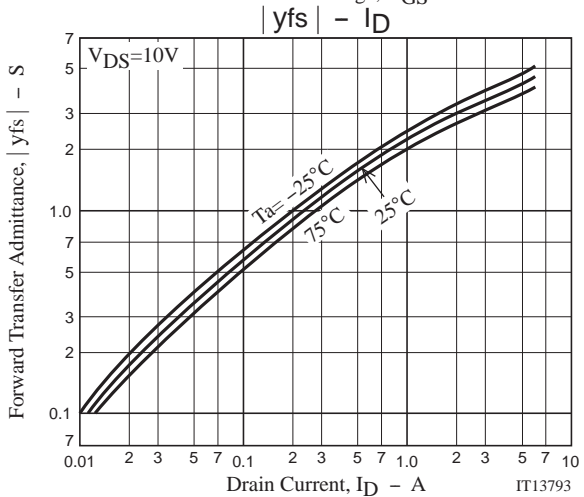
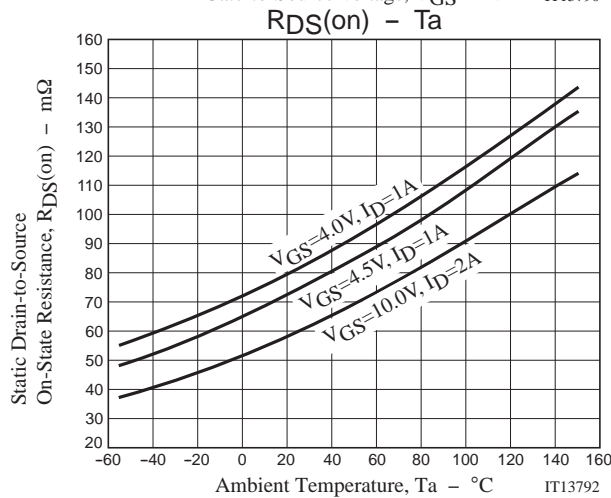
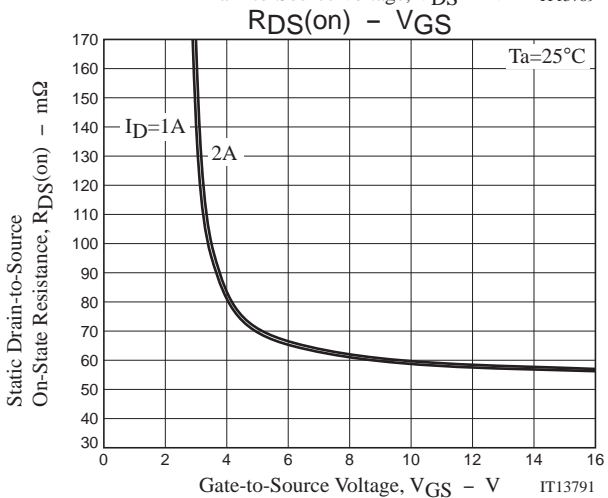
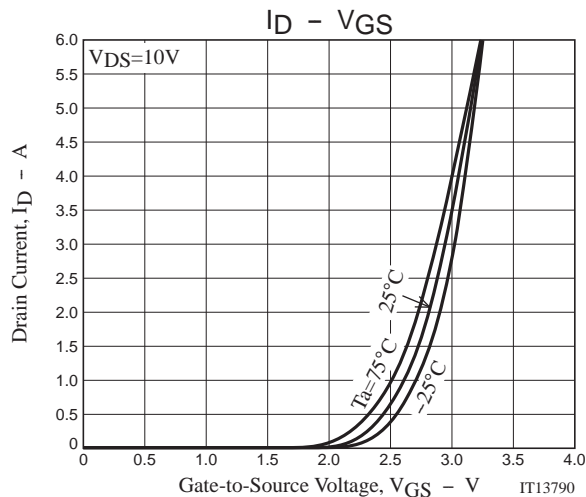
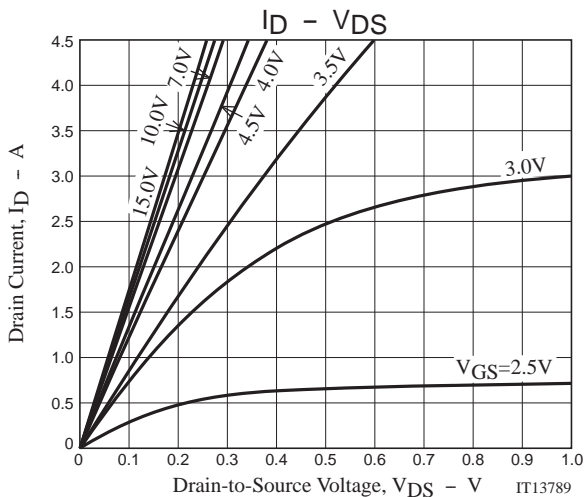
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	V(BR)DSS	I _D =1mA, V _{GS} =0V	60			V
Zero-Gate Voltage Drain Current	I _{DSS}	V _{DS} =60V, V _{GS} =0V			1	μA
Gate-to-Source Leakage Current	I _{GSS}	V _{GS} =±16V, V _{DS} =0V			±10	μA
Cutoff Voltage	V _{GS(off)}	V _{DS} =10V, I _D =1mA	1.2		2.6	V
Forward Transfer Admittance	y _{fs}	V _{DS} =10V, I _D =2A	1.8	3		S
Static Drain-to-Source On-State Resistance	R _{DS(on)1}	I _D =2A, V _{GS} =10V		60	78	mΩ
	R _{DS(on)2}	I _D =1A, V _{GS} =4.5V		74	104	mΩ
	R _{DS(on)3}	I _D =1A, V _{GS} =4V		81	114	mΩ
Input Capacitance	C _{iss}	V _{DS} =20V, f=1MHz		505		pF
Output Capacitance	C _{oss}			57		pF
Reverse Transfer Capacitance	C _{rss}			37		pF
Turn-ON Delay Time	t _{d(on)}		See specified Test Circuit.		7.3	
Rise Time	t _r			9.8		ns
Turn-OFF Delay Time	t _{d(off)}			40		ns
Fall Time	t _f			24		ns
Total Gate Charge	Q _g	V _{DS} =30V, V _{GS} =10V, I _D =4.5A			10	
Gate-to-Source Charge	Q _{gs}			1.6		nC
Gate-to-Drain "Miller" Charge	Q _{gd}			2.1		nC
Diode Forward Voltage	V _{SD}	I _S =4.5A, V _{GS} =0V		0.83	1.2	V

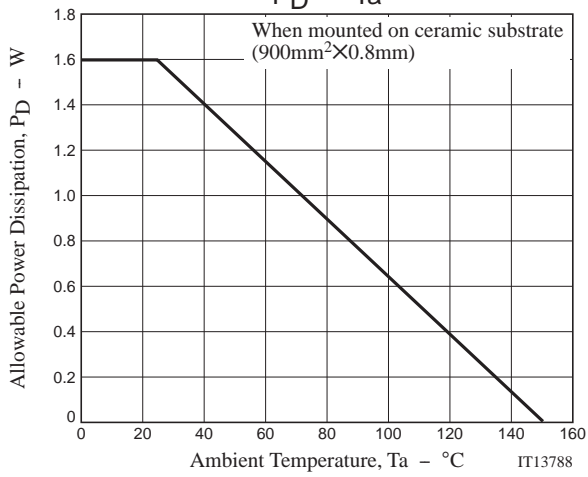
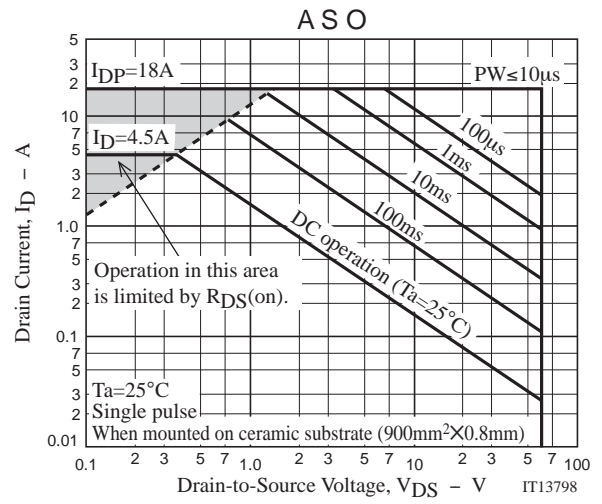
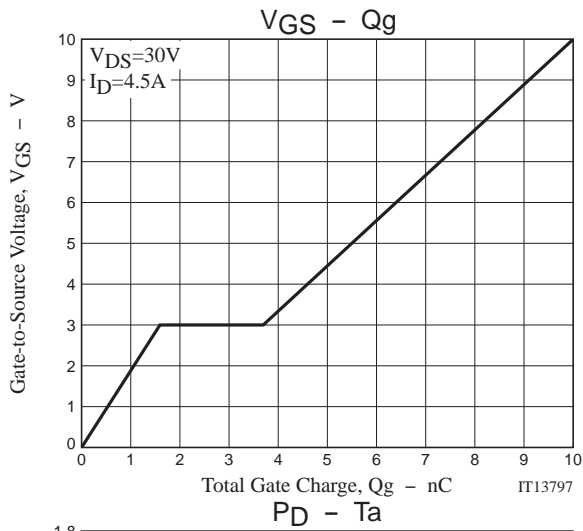
Switching Time Test Circuit



Ordering Information

Device	Package	Shipping	memo
CPH6444-TL-E	CPH6	3,000pcs./reel	Pb Free





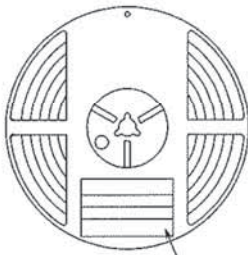
Embossed Taping Specification

CPH6444-TL-E

1. Packing Format

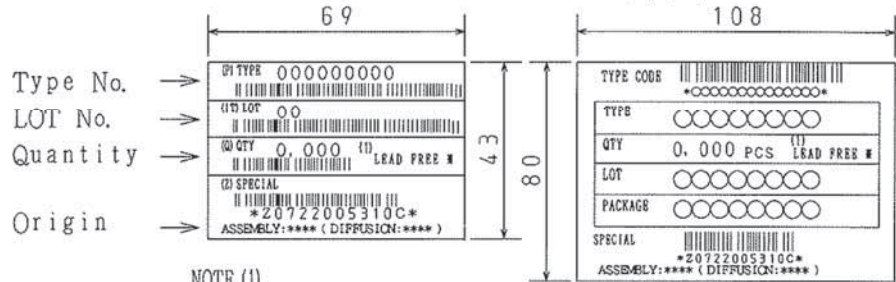
Package Name	Carrier Tape Type	Maximum Number of devices contained (pcs)			Packing format	
		Reel	Inner box	Outer box	Inner BOX (C-1)	Outer BOX (A-7)
CPH6	CPH6	3,000	15,000	90,000	5 reels contained Dimensions:mm (external) 183×72×185	6 inner boxes contained Dimensions:mm (external) 440×195×210

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.



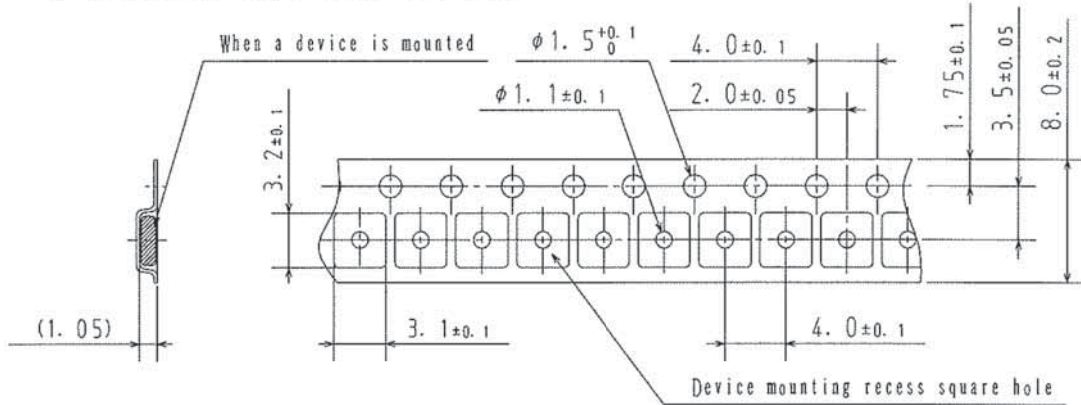
NOTE (1)

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

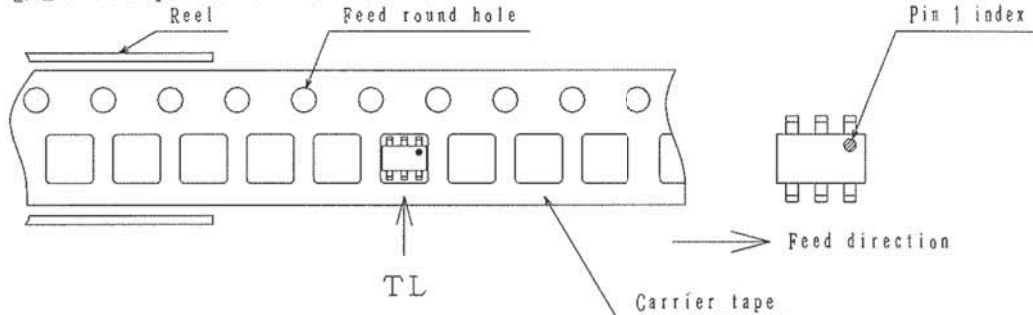
Label	JEITA Phase
LEAD FREE 3	JEITA Phase 3A
LEAD FREE 4	JEITA Phase 3

2. Taping configuration

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



2-2. Device placement direction

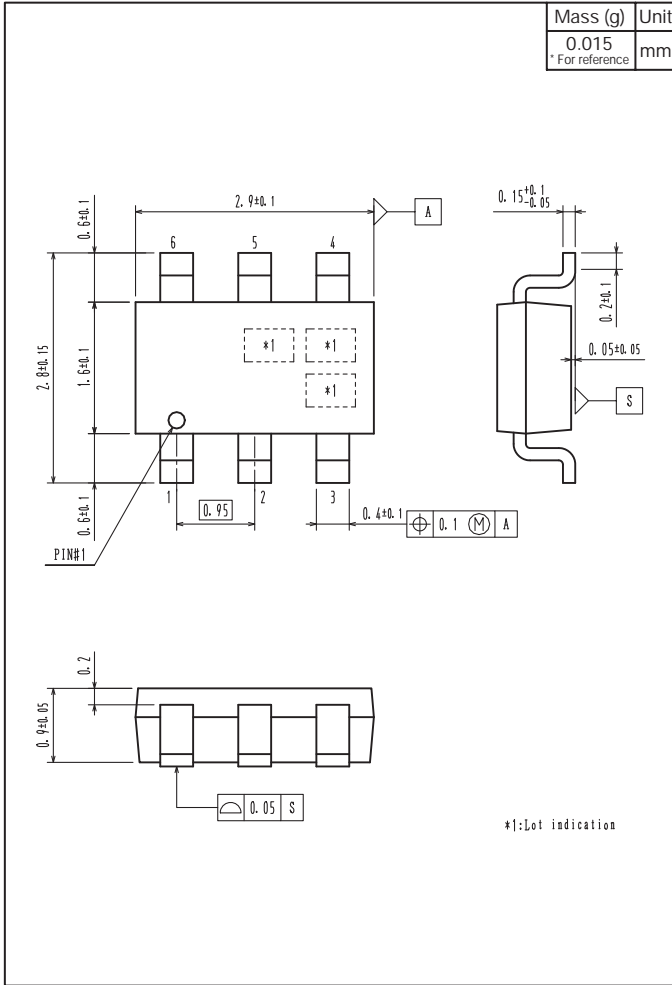


Those with pin 1 index on the feed hole side.....TL

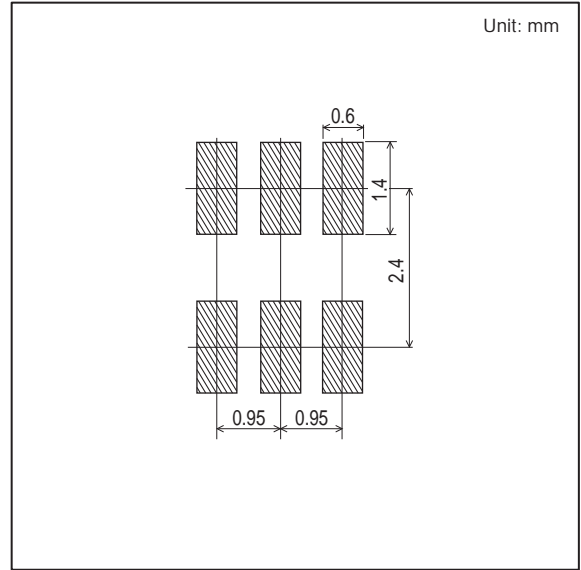
CPH6444

Outline Drawing

CPH6444-TL-E



Land Pattern Example



Note on usage : Since the CPH6444 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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