

SANYO Semiconductors

DATA SHEET

An ON Semiconductor Company



N-Channel Silicon MOSFET **CPH3448** — General-Purpose Switching Device **Applications**

Features

- 1.8V drive
- · Halogen free compliance
- · Protection diode in

Specifications

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	VDSS		30	V
Gate-to-Source Voltage	VGSS		±12	V
Drain Current (DC)	ID		4	А
Drain Current (Pulse)	IDP	PW⊴10µs, duty cycle≤1%	16	А
Allowable Power Dissipation	PD	When mounted on ceramic substrate (900mm ² ×0.8mm)	1.0	W
Channel Temperature	Tch		150	°C
Storage Temperature	Tstg		-55 to +150	°C

Package Dimensions

unit : mm (typ) 7015A-004



Product & Package Information

• Package

- JEITA, JEDEC
 - : SC-59, TO-236, SOT-23

: CPH3

• Minimum Packing Quantity : 3,000 pcs./reel

Packing Type: TL





Electrical Connection



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Electrical Characteristics at Ta=25°C

Parameter	Symbol Conditions			1.1		
Parameter			min	min typ max		- Unit
Drain-to-Source Breakdown Voltage	V(BR)DSS	ID=1mA, VGS=0V	30			V
Zero-Gate Voltage Drain Current	IDSS	V _{DS} =30V, V _{GS} =0V			1	μA
Gate-to-Source Leakage Current	IGSS	V _{GS} =±8V, V _{DS} =0V			±10	μΑ
Cutoff Voltage	V _{GS} (off)	V _{DS} =10V, I _D =1mA	0.4		1.3	V
Forward Transfer Admittance	yfs	V _{DS} =10V, I _D =2A		3.4		S
	R _{DS} (on)1	ID=2A, VGS=4.5V		38	50	mΩ
Static Drain-to-Source On-State Resistance	R _{DS} (on)2	ID=1A, VGS=2.5V		51	72	mΩ
	R _{DS} (on)3	I _D =0.5A, V _{GS} =1.8V		80	130	mΩ
Input Capacitance	Ciss	V _{DS} =10V, f=1MHz		430		pF
Output Capacitance	Coss	V _{DS} =10V, f=1MHz		59		pF
Reverse Transfer Capacitance	Crss	V _{DS} =10V, f=1MHz		38		pF
Turn-ON Delay Time	t _d (on)	See specified Test Circuit.		10		ns
Rise Time	tr	See specified Test Circuit.		41		ns
Turn-OFF Delay Time	td(off)	See specified Test Circuit.		36		ns
Fall Time	tf	See specified Test Circuit.		37		ns
Total Gate Charge	Qg	V _{DS} =15V, V _{GS} =4.5V, I _D =4A		4.7		nC
Gate-to-Source Charge	Qgs	V _{DS} =15V, V _{GS} =4.5V, I _D =4A		0.8		nC
Gate-to-Drain "Miller" Charge	Qgd	VDS=15V, VGS=4.5V, ID=4A 1.1			nC	
Diode Forward Voltage	V _{SD}	IS=4A, VGS=0V		0.82	1.2	V

Switching Time Test Circuit



Ordering Information

0				
Device	Package	Shipping	memo	
CPH3448-TL-H	CPH3	3,000pcs./reel	Pb Free and Halogen Free	







Embossed Taping Specification CPH3448-TL-H

1. Packing Format

Package Name	Carrier Tape	Maximum Number of devices contained (pcs)			Packing format				
14-501-50-	Type	Reel inner box Outer box		Inner BOX (C-1)			Outer BOX (A-7)		
СРНЗ	CPH3	3, 000	15,000	90,000	5 reels contained Dimensions:mm (external)			6 inner boxes contained al) Dimensions:mm (external)	
					The second second	×72×		A STATE OF A	
Packing met	:hod		Reel	(u 1	nit:mr	<u>x label</u>)	It i The	<u>ter box label</u> is a label at the time of factory shipme form of a label may change in physical tribution process.	
	Type				t INDE A THE A CONTRACTOR OF A CONT			108 TYPE CODE •000000000000000000000000000000000000	
	Quan	tity		CTY 0, 00 111111 1111 111111 SPECIAL # 11111 11111 # 20 7 2 2 (SSEMELY: ****	0 ⁽¹⁾ LEAD	+ +	8 0	GTY O, 000 PCS LEAD FREE # LOT OCCONTRACTOR OF CONTRACTOR	
	Reel la		NOTE	: (1) e LBAD FI	REE 💥 de	scription		special #20722005310C* ASSEMBLY:**** (DIFFUSICN:****) that the surface	
	Version and the second second	1470 - HARA	tr -	eatment o					
				Label LEAD FRE	Contractor and the second	JEITA JEITA P	Phase 3		
				LEAD FRE		JEITA P			

2. Taping configuration

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



Those with one electrode terminal on the feed hole side TL

Outline Drawing CPH3448-TL-H



Land Pattern Example



Note on usage : Since the CPH3448 is a MOSFET product, please avoid using this device in the vicinity of highly charged objects.

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