



LOONGSON

LS8T 41505

V1.2

2024 09

自主决定命运, 创新成就未来





19 11

(Tel) 025-58600707



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4	4
5		



1.

LS8T41505	25MHz	LVDS	LVCMD5	LPHCSL
	LVCMD5	100MHz		LVDS
200MHz	LPHCSL	100MHz		
	4			
PC	PCI E2.0			

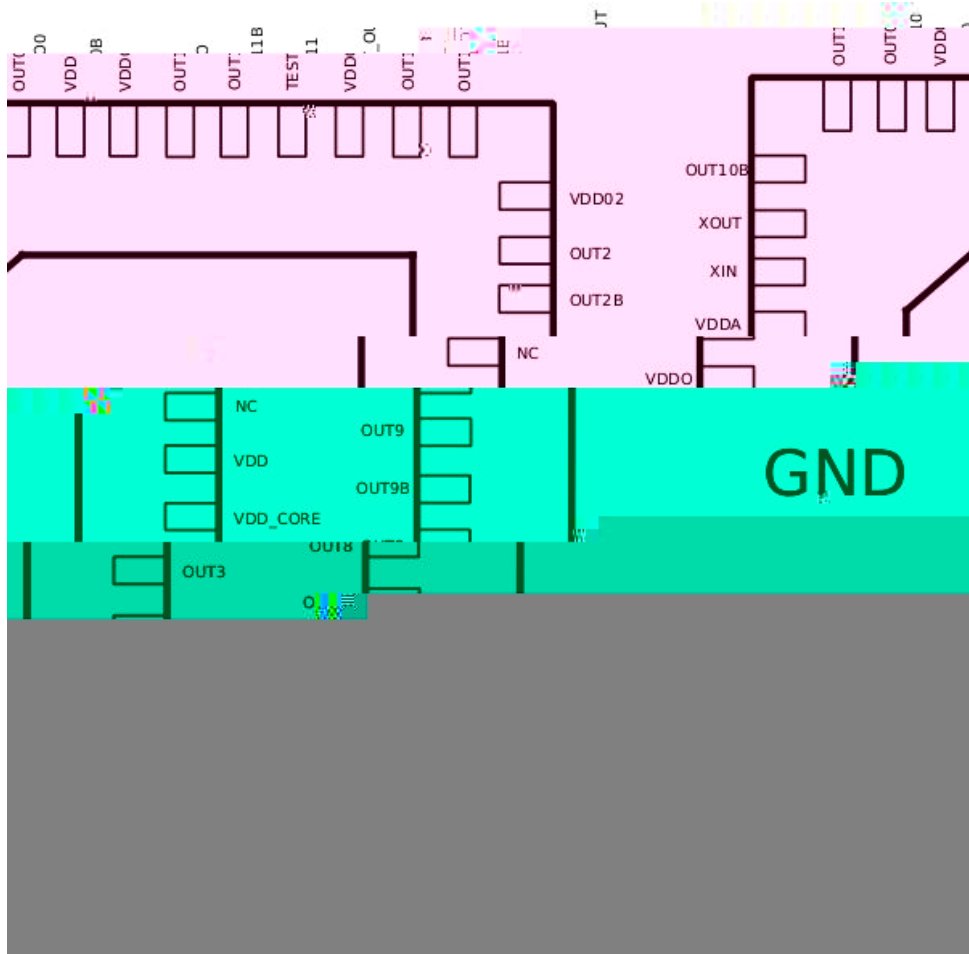
2.

- 3.3V 1.8V
- LVCMD5 LPHCSL LVDS
-
- CUT0 25MHz/100MHz LVCMD5
- CUT1 33.33MHz LVCMD5/100MHz LP-HCSL/25MHz LP-HCSL
- CUT2 100MHz LVCMD5/100MHz LP-HCSL/200MHz LVDS/156.25MHz LP-HCSL
- CUT3 5-11 100MHz LP-HCSL
- CUT4 100MHz/200MHz LVDS/100MHz LP-HCSL
- 25MHz
- -40 +105

3.

1 LS8T41505

1 LS8T41505



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1	OUT10B	Output	Output Clock10	100MHz LP-HCSL
2	XOUT	Input		
3	XIN/REF	Input	25MHz	25MHz 1.8V
4	VDDA	Power		1.80V
5	VDD0	Power	OUT3 OUT5-11/OUT3B OUT5B-11B	1.80V
6	OUT9	Output	Output Clock9	100MHz LP-HCSL
7	OUT9B	Output	Output Clock9	100MHz LP-HCSL
8	OUT8	Output	Output Clock8	100MHz LP-HCSL
9	OUT8B	Output	Output Clock8	100MHz LP-HCSL
10	OUT7	Output	Output Clock7	100MHz LP-HCSL
11	OUT7B	Output	Output Clock7	100MHz LP-HCSL
12	CE	Input		
13	SEL1	Input		5
14	SELO	Input		5
15	VDD	Power	1.80V	
16	VDD0	Power	OUT3 OUT5-11/OUT3B OUT5B-11B	1.80V
17	OUT6	Output	Output Clock6	100MHz LP-HCSL

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18	OUT6B	Output	Output Clock6	100MHz LP-HCSL		
19	OUT5	Output	Output Clock5	100MHz LP-HCSL		
20	OUT5B	Output	Output Clock5	100MHz LP-HCSL		
21	VDDO4	Power	OUT4	3.30V		
22	OUT4	Output	Output Clock4	100MHz LP-HCSL	100MHz/200MHz LVDS	
23	OUT4B	Output	Output Clock4 LVDS	100MHz LP-HCSL	100MHz/200MHz	
24	NC	NC				
25	NC	NC			ΓΛ	
26	NC	NC				
27	VDDO	Power	OUT3 OUT5-11/OUT3B	OUT5B-11B	1.80V	
28	OUT3B	Output	Output Clock3	100MHz LP-HCSL		
29	OUT3	Output	Output Clock3	100MHz LP-HCSL		
30	VDD_Core	Power	VCO	1.80V		
31	VDD	Power	1.80V			
32	NC	NC				
33	NC	NC				
34	OUT2B	Output	Output Clock2 200MHz LVDS	100MHz LVCMOS 156.25MHz LP-HCSL	100MHz LP-HCSL	100MHz LP-HCSL
35	OUT2	Output	Output Clock2	100MHz LVCMOS 156.25MHz LP-HCSL	100MHz LP-HCSL	200MHz LVDS
36	VDDO2	Power	OUT2/OUT2B	PLL	3.30V	
37	OUT1B	Output	Output Clock1 100MHz LP-HCSL	33.33MHz LVCMOS 25MHz LP-HCSL		
38	OUT1	Output	Output Clock1 LP-HCSL	33.33MHz LVCMOS	100MHz LP-HCSL	25MHz
39	VDDO1	Power	OUT1/OUT1B	CSC	3.30V	
40	TEST_OUT	Output				
41	OUT11	Output	Output Clock11	100MHz LP-HCSL		
42	OUT11B	Output	Output Clock11	100MHz LP-HCSL		
43	VDDO	Power	OUT3 OUT5-11/OUT3B	OUT5B-11B	1.80V	
44	VDD	Power	1.80V			
45	OUT0B	Output	Output Clock0B	25MHz/100MHz LVCMOS		
46	VDDCO	Power	OUT0/OUT0B	1.80V	3.30V	
47	OUT0	Output				

MHZBOV



4.

LS8T41505

CPU

7A1000 7A2000



2

1 41505

			/			/			
45	OUT0B	LVCMS	30		45	5		20	
47	OUT0	LVCMS	20		40	10		30	
37, 38	OUT1/ OUT1B	LVCMS	20		30	20	24	30	
		LP-HCSL	13		19	31	33	37	
34, 35	OUT2/	LVCMS	20		30	20	24	30	

4



		LP- HCSL	13		19	31	33	37	
		LVDS	70		90	10		30	
28, 29	OUT3/ OUT3B	LP- HCSL	13		19	31	33	37	
22, 23	OUT4/ OUT4B	LP- HCSL	13		19	31	33	37	
		LVDS	70		90	10		30	
19, 20, 17, 18, 1 0, 11, 8, 9, 6, 7, 1, 48, 41, 42	OUT5- OUT11 /OUT5B- OUT 11B	LP- HCSL	13		19	31	33	37	

2

3

4 OUT1 OUT1B OUT2 OUT2B OUT3 OUT3B OUT4 OUT4B OUT5 OUT5B OUT6
OUT6B OUT7 OUT7B OUT8 OUT8B OUT9 OUT9B OUT10 OUT10B OUT11 OUT11B

5 epad

PCB

5.

2

VDD	0V 2.7V
VDD_CORE	0V 2.7V
VDDA	0V 2.7V
VDDO	0V 2.7V
VDDCO	0V 5.0V
VDDO1	0V 5.0V
VDDO2	0V 5.0V
VDDO4	0V 5.0V
	-65 150
	200mA
J _c	42 /W
ESD HBM	1000V

3

VDD	1.8V± 5%
VDD_CORE	1.8V± 5%



VDDA

1. 8V± 5%

VDDO

1. 8V± 5%

VDDCO

1. 8V± 5% 3. 3V± 5%

VDDO1

3. 3V± 5%

VDDO2

3. 3V± 5%

VDDO4

3. 3V± 5%

25MHz± 20ppm

- 40



LVDS						
LVDS	V_{OF}			240	460	nV
LVDS	V_{OD}				50	nV
LVDS	V_{OS}	VDD00=VDD01=VDD02=VDD04=3.3V, VD		1.12	1.3	1.40 V
LVDS	V_{OS}	DO=VDDA=VDD_CORE=VDD=1.8V			50	nV
LVDS	I_{OS}			12	24	mA
LVDS	I_{OSD}			6.8	24	uA
LP-HCSL						
LPHCSL	V_{OH}	VDD00=VDD01=VDD02=VDD04=3.3V, VD		0.60	0.85	V
LPHCSL	V_{OL}	DO=VDDA=VDD_CORE=VDD=1.8V		-0.15	0.15	V
/	t_R/t_F	VDD00=VDD01=VDD02=VDD04=3.3V, VD		1	3	ns
	t_{RF}	DO=VDDA=VDD_CORE=VDD=1.8V		0.22	0.85	V/ns
	f_{LJ}				25.00	MHz
	f_{DJT}			25	200	MHz
VCO	f_{VCO}	VCO			2000/ 2500	MHz
	f_{PFD}				25	MHz
	f_{BW}	25MHz		0.05	0.3	MHz
	t_2			45	55	%
	t_3			40	60	%
	t_4	3.3V LVCMOS =5pF		1.2	2.7	V/ns
/	t_5	LVDS		0.5	1	3 ns
jitter	t_6	RMS jitter CUTO 25MHz LVCMOS		0.5	1	3 ps
		RMS jitter 100MHz LP-HCSL			1	3 ps
	t_7	PLL			10	ns
		PLL		2	4	ns
		PCB LVCMOS			30	cm
		PCB LVDS			30	cm
		PCB LP-HCSL			30	cm

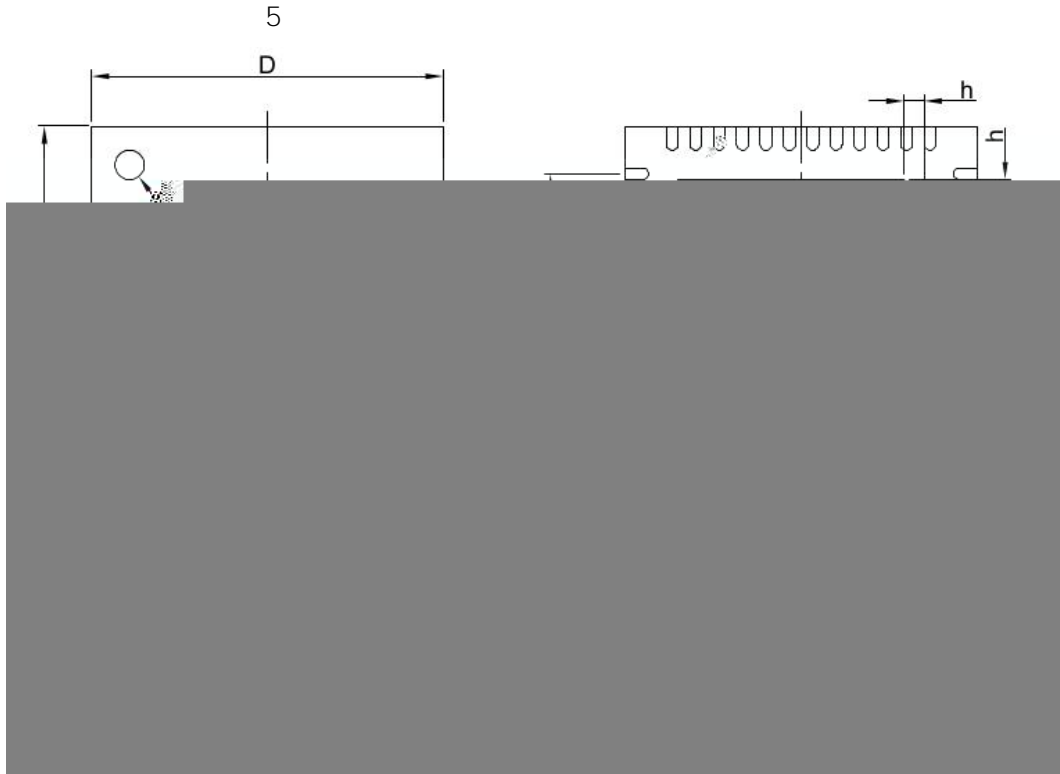




9.

6.00 mm× 6.00 mm× 0.60 mmMAX

CFN48



	MIN	NOM	MAX		MIN	NOM	MAX
A	0.50	0.55	0.60	b	0.15	0.20	0.25
A1	—	0.02	0.05	c	0.12	0.15	0.18
D	5.90	6.00	6.10	h	0.30	0.35	0.40
D1	4.10	4.20	4.30	e	-	0.40	-
E	5.90	6.00	6.10	Ne	-	4.40	-
E1	4.10	4.20	4.30	Nd	-	4.40	-
L	0.35	0.40	0.45				



10.



- a
- b " LS8T41505-A" A -i -H
- c B 4 5
- d C 00001

11.

6 LS8T41505

LS8T41505		0 ~+70
LS8T41505-i		-40 ~+85
LS8T41505-H		-40 ~+105

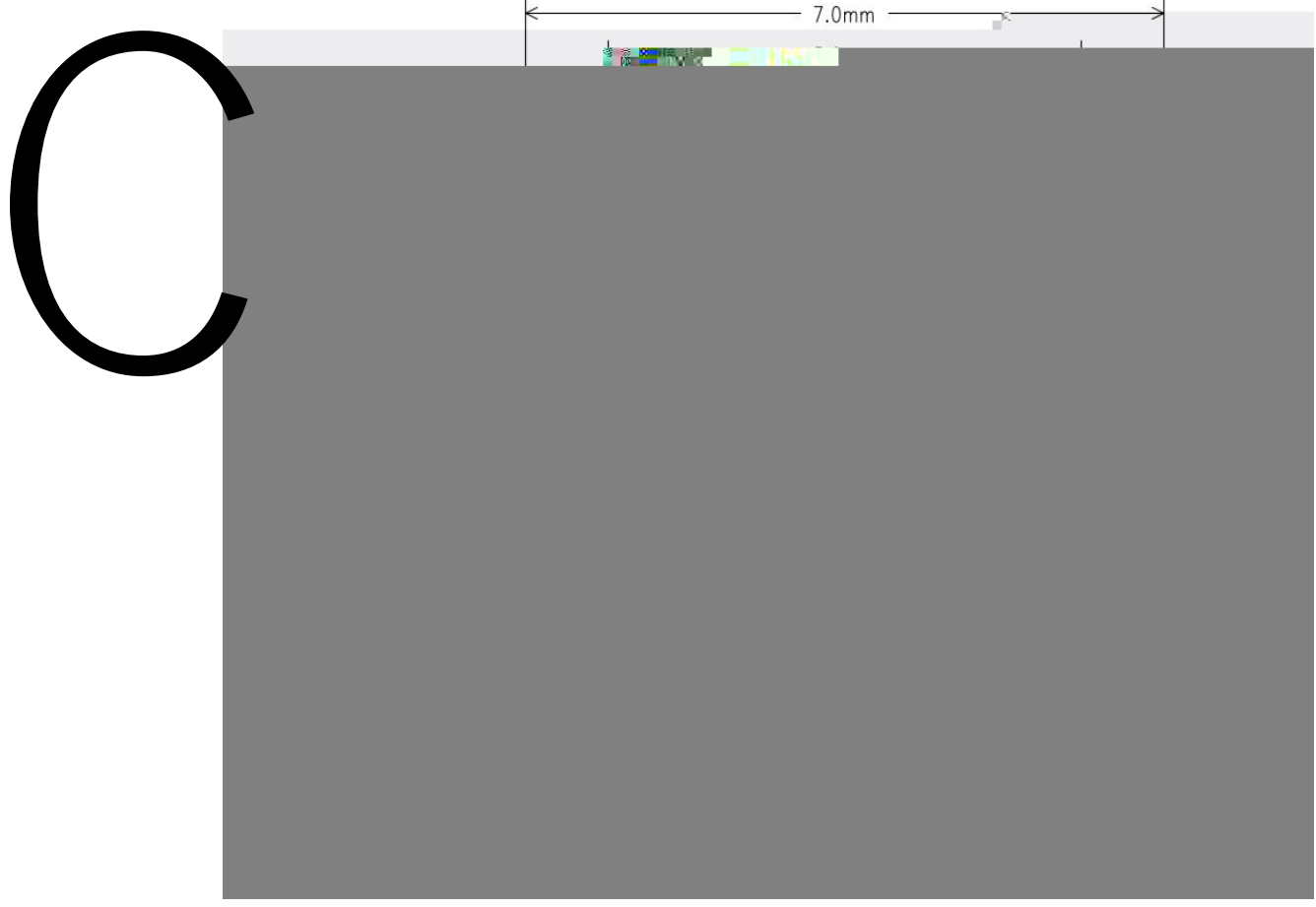
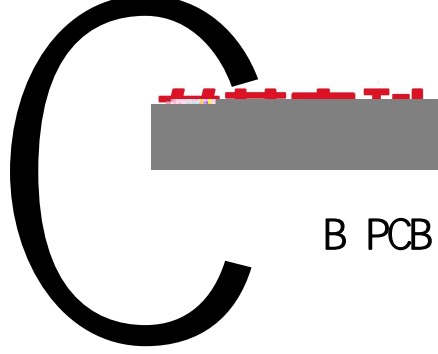
12.



- a
- b
- c
- d ESD
- e
- f 45%-75%
- g



A



EPAD 4. 5mm SQ