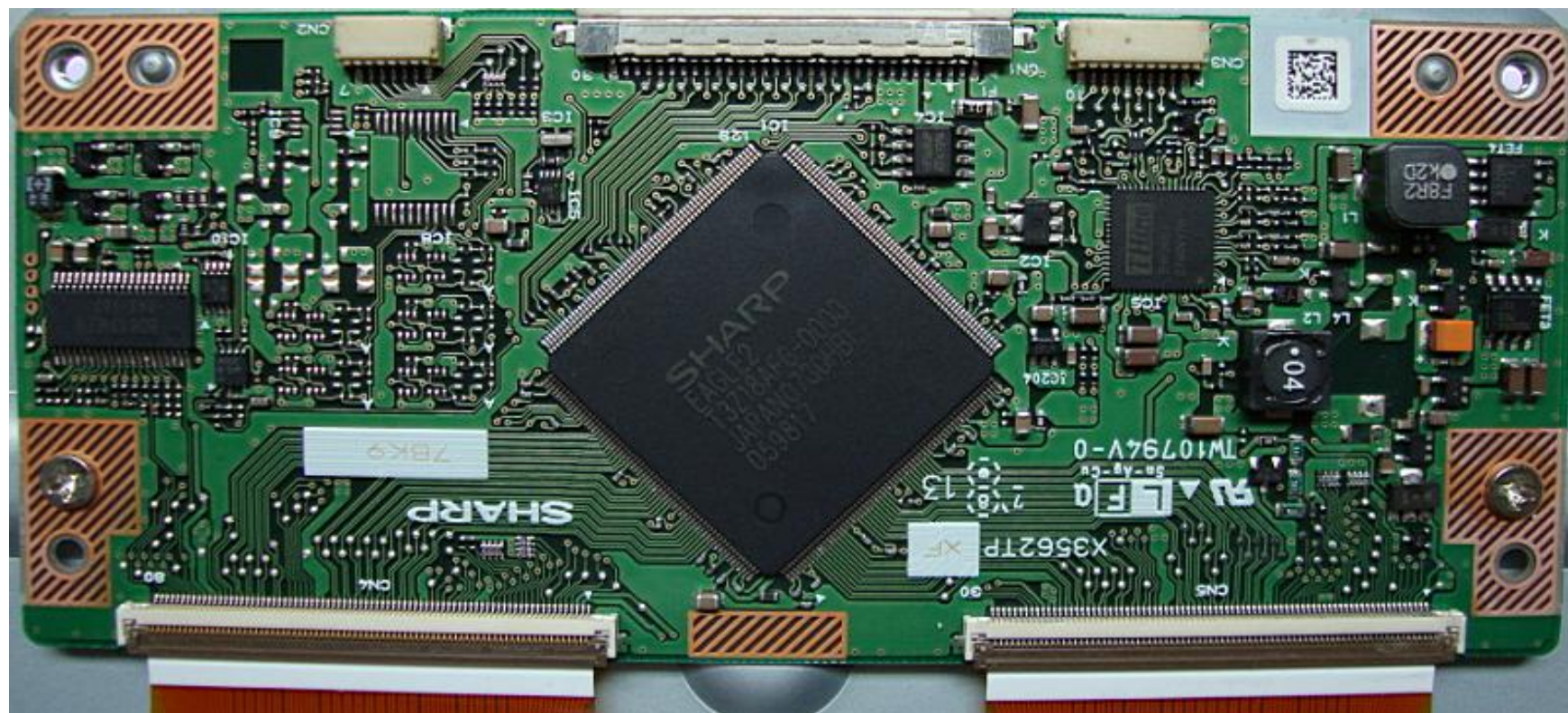


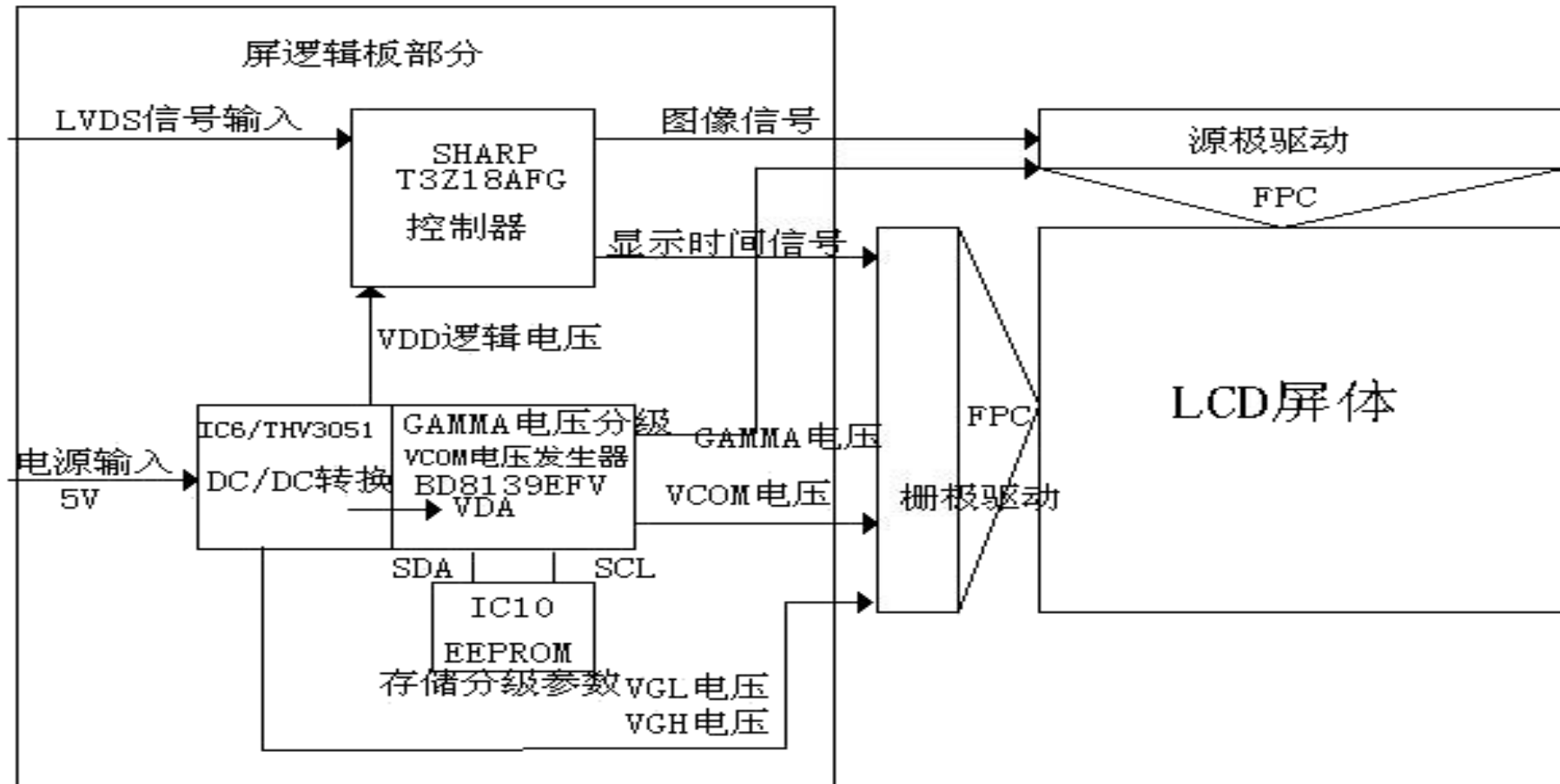
SHARP LK315T3LZ54屏逻辑板(T-CON)维修资料

- 实物图；
- LCD屏逻辑板结构图；
- DC/DC变换电路；采用THV305的DC/DC电路
- 采用BD8139EFVGamma校正电压,VCOM电压发生器；
- LVDS//LVCMOS/LVTTL格式转换电路；

SHARP LK315T3LZ54屏逻辑板(T-CON)实物图



SHARP LK315T3LZ54屏逻辑板 结构图



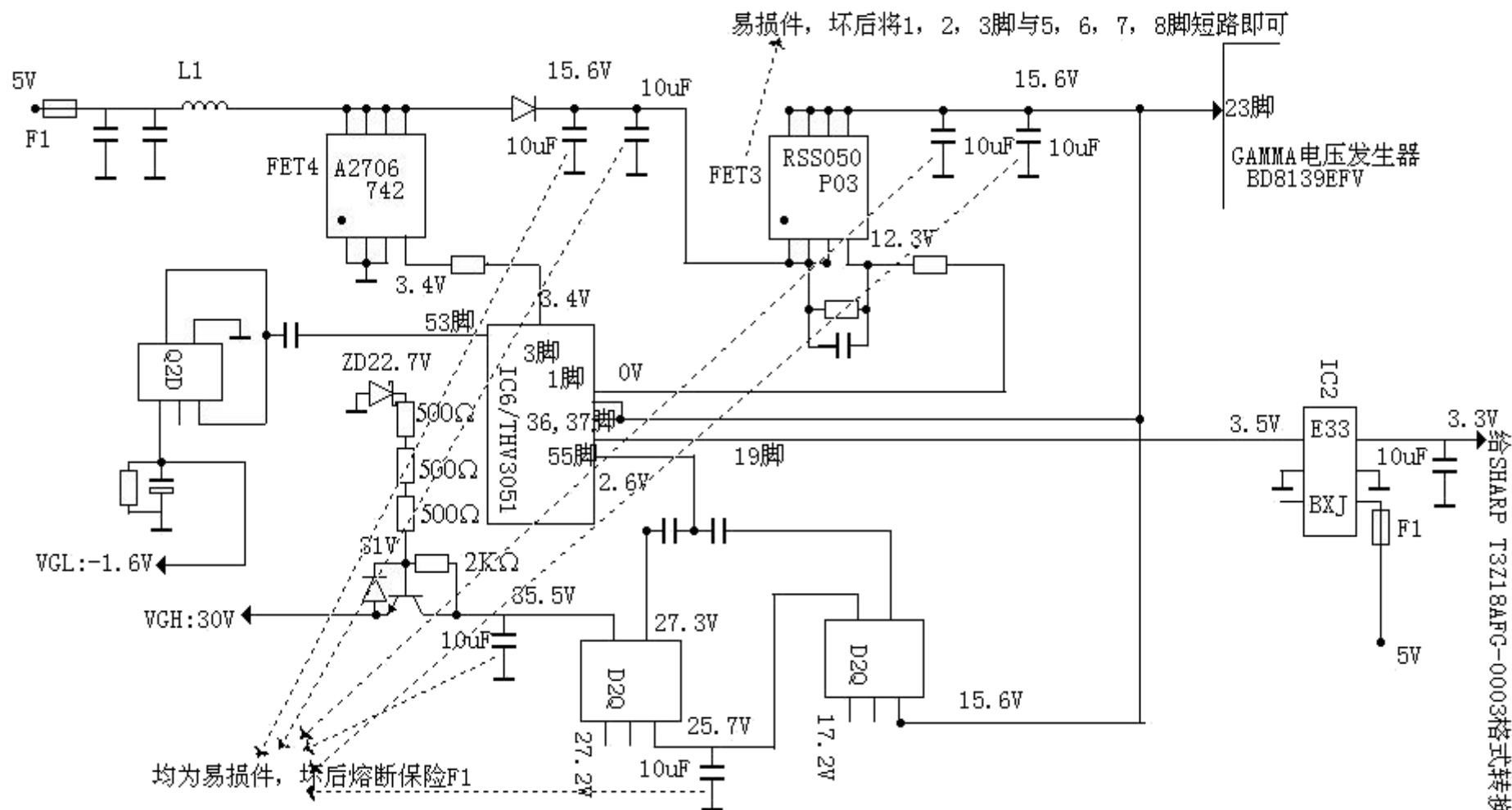
SHARP LK315T3LZ54屏逻辑板结构图

采用THV3051的DC/DC电路实物

该电路的作用是产生屏所需的VGL,VGH, 以及gamma电压发生器所需的VDA:15.6V电压（不同屏所需电压不同），和格式转换IC所需的VDD供

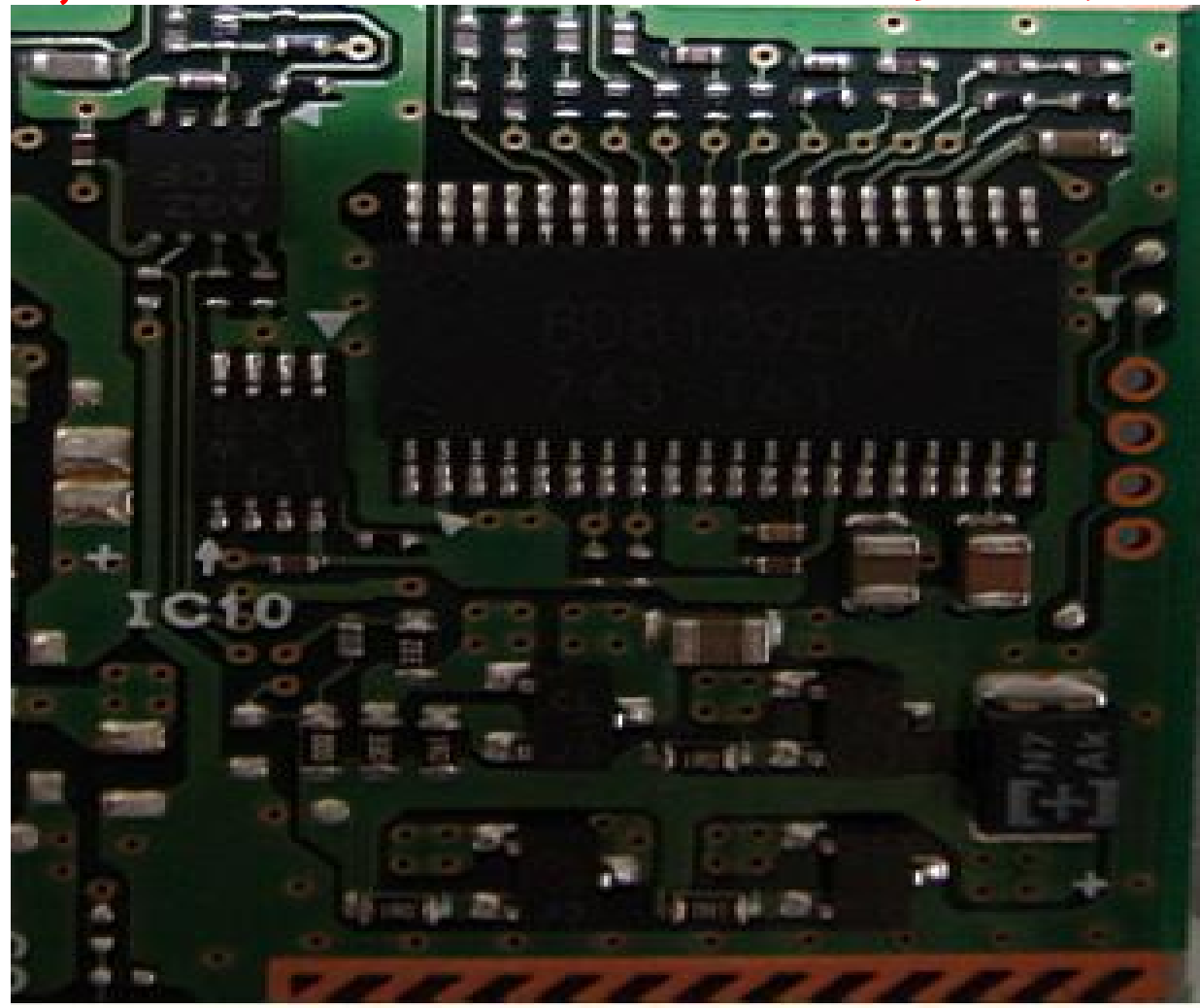


(自绘) 采用THV3051的DC/DC电路 路易损件维修提示



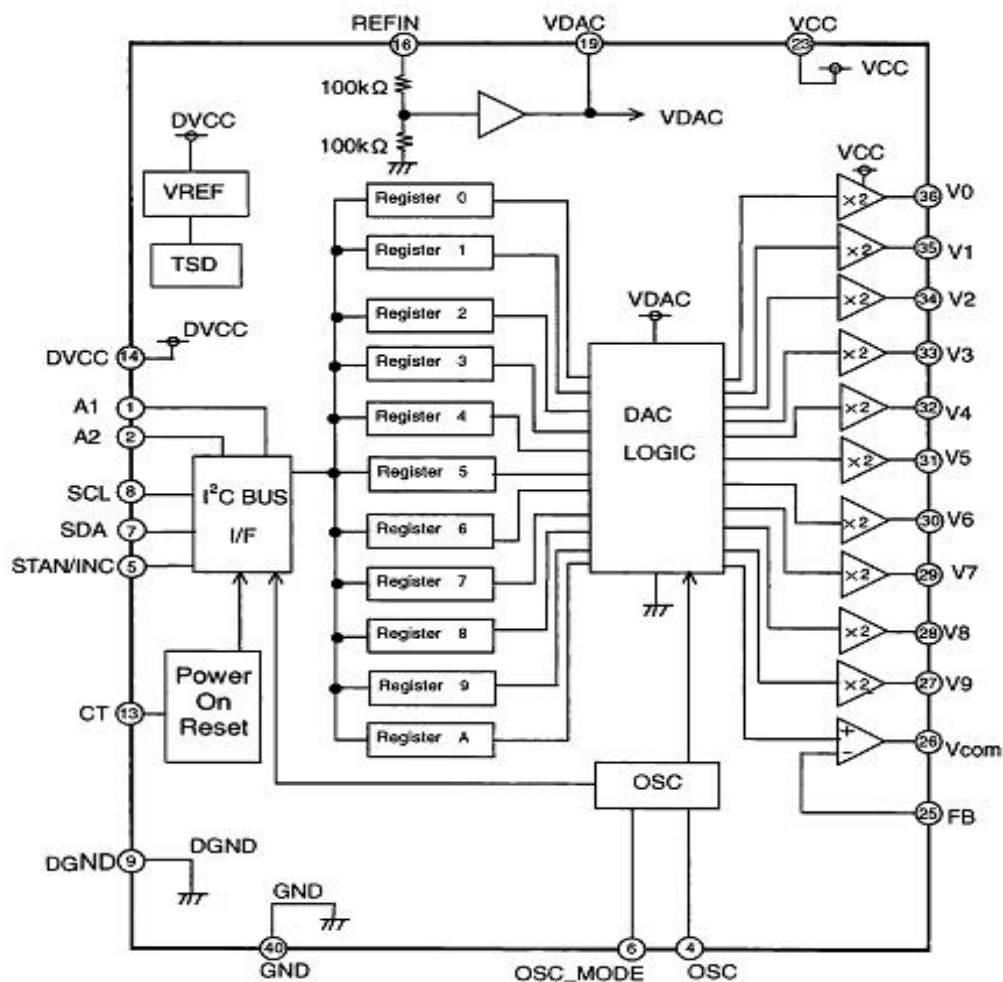
SHARP LK315T3LZ54逻辑板DC/DC电路

采用BD8139EFV/Gamma校正电压, VCOM电压发生器实物图



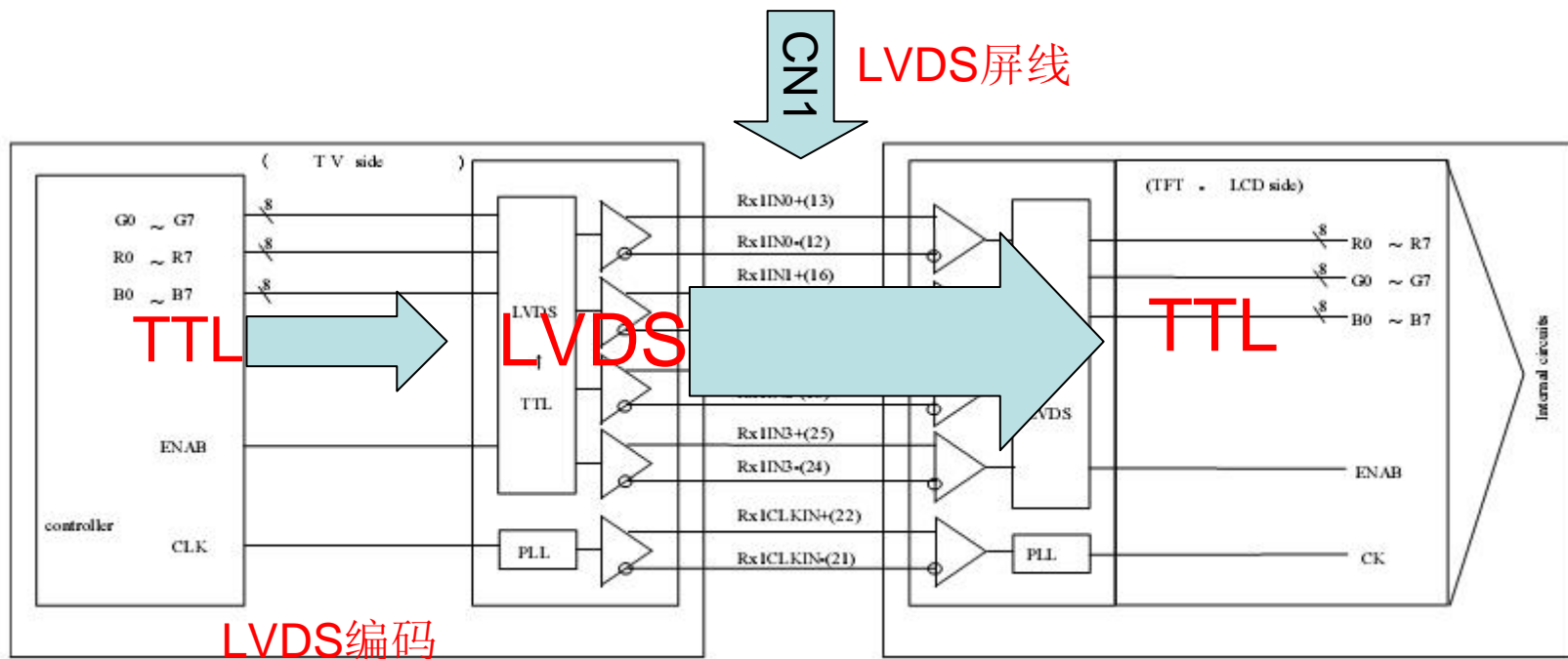
采用BD8139EFVGamma校正电压, VCOM电压发生器

引脚功能



PIN No	PIN NAME	Function	PIN No	PIN NAME	Function
1	A1	Slave/Slave address set ^① Autoread/word address set ^① for EEPROM	21	NC	-
2	A2	Slave/Slave address set ^② Autoread/word address set ^② for EEPROM	22	NC	-
3	NC	-	23	VCC	POWER SUPPLY
4	OSC	SYNCHRONIZED CLOCK INPUT	24	NC	-
5	STAN/INC	INPUT MODE SWITCH FOR I ² C	25	FB	COM negative feedback INPUT
6	OSC_MODE	OSC MODE SWITCH (INTERNAL/EXTERNAL)	26	VCOM	COM OUTPUT
7	SDA	DATA SIGNAL INPUT FOR I ² C	27	V9	GAMMA 9 output
8	SCL	CLOCK SIGNAL INPUT FOR I ² C	28	V8	GAMMA 8 output
9	DGND	GROUND	29	V7	GAMMA 7 output
10	DACGND	GROUND FOR DAC	30	V6	GAMMA 6 output
11	NC	-	31	V5	GAMMA 5 output
12	NC	-	32	V4	GAMMA 4 output
13	CT	CAPACITOR CONNECTION FOR POWER ON RESET	33	V3	GAMMA 3 output
14	DVCC	DIGITAL POWER SUPPLY	34	V2	GAMMA 2 output
15	NC	-	35	V1	GAMMA 1 output
16	REF IN	DAC REFERENCE INPUT	36	V0	GAMMA 0 output
17	NC	-	37	NC	-
18	NC	-	38	NC	-
19	VDAC	DAC VOLTAGE OUTPUT	39	NC	-
20	NC	-	40	GND	GROUND

LVDS//LVCMOS/LVTTL格式转换电路简图



CN1/ LVDS屏线接口释义

Pin No.	Symbol	Function	Remark
1	VCC	+5V Power Supply	
2	VCC	+5V Power Supply	
3	VCC	+5V Power Supply	
4	VCC	+5V Power Supply	
5	GND	GND	
6	GND	GND	
7	GND	GND	
8	GND	GND	
9	SELLVDS	Select LVDS data order. LVDS数据传送次序选择	Pull up Default H:3.3V [Note 2] 上拉, 默认高电平3.3V
10	Reserved	Not Available	
11	GND	Ground	
12	RIN0-	Negative (-) LVDS differential data input	LVDS
13	RIN0+	Positive (+) LVDS differential data input	LVDS
14	GND	Ground	
15	RIN1-	Negative (-) LVDS differential data input	LVDS
16	RIN1+	Positive (+) LVDS differential data input	LVDS
17	GND	Ground	
18	RIN2-	Negative (-) LVDS differential data input	LVDS
19	RIN2+	Positive (+) LVDS differential data input	LVDS
20	GND	Ground	
21	CLKIN-	Clock Signal(-)	LVDS
22	CLKIN+	Clock Signal(+)	LVDS
23	GND	Ground	
24	RIN3-	Negative (-) LVDS differential data input	LVDS
25	RIN3+	Positive (+) LVDS differential data input	LVDS
26	GND	Ground	
27	Reserved	Not Available	
28	Reserved	Not Available	
29	Reserved	Not Available	
30	Reserved	Not Available	

供电

地

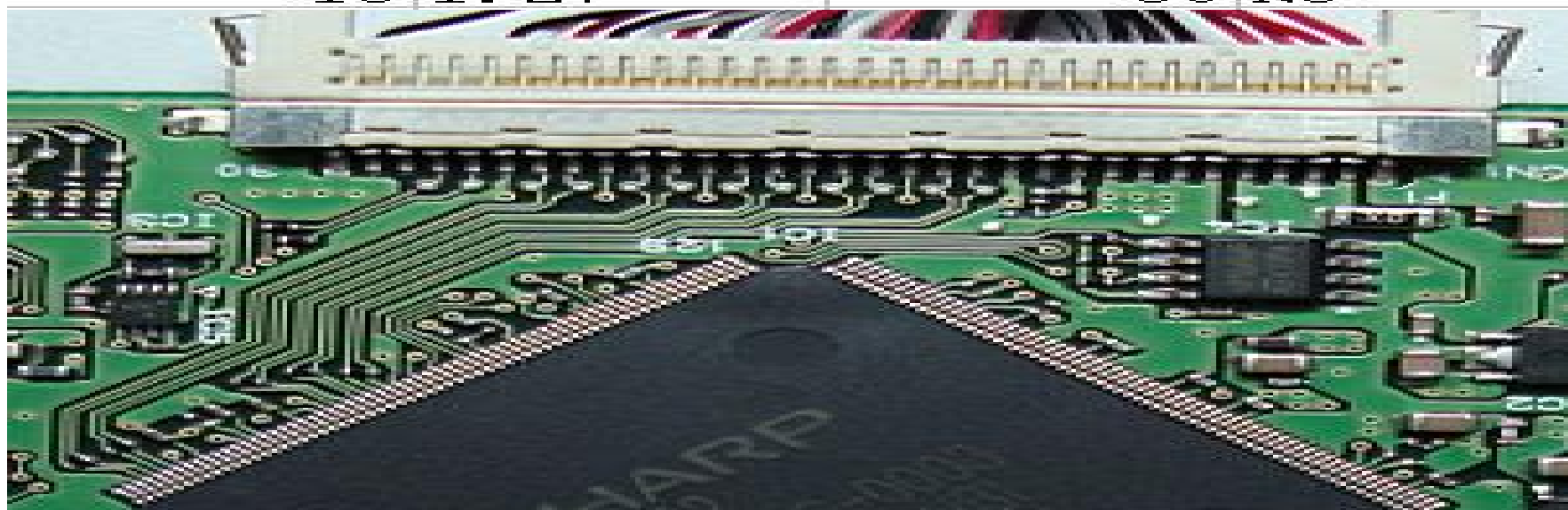
LVDS数据传送次序选择

上拉, 默认高电平3.3V

时钟信号

CN1/ LVDS屏线接口实测电压值

Pin NO	电压值	Pin NO	电压值
1	5.2V	16	1.1V
2	5.2V	17	GND
3	5.2V	18	1.3V
4	5.2V	19	1.1V
5	GND	20	GND
6	GND	21	1.2V
7	GND	22	1.2V
8	GND	23	GND
9	0V	24	1.3V
10	NC	25	1.1V
11	GND	26	GND
12	1.2V	27	NC
13	1.1V	28	NC
14	GND	29	NC
15	1.2V	30	NC



CN4,CN5输出排线实测电压值



脚位	电压值	脚位	电压值	脚位	电压值	脚位	电压值
CN4 1	GND	21	6.6V	41	1.32V	61	1.34V
CN4	2 负1.6VGL	22	7.5V	42	1.23V	62	1.24V
	3 31V VGH	23	5.5V	43	1.32V	63	1.3V
	4 0V	24	5.1V	44	1.24V	64	1.25V
	5 0V	25	4.9V	45	1.32V	65	1.3V
	6 0.8V	26	4.7V	46	1.24V	66	1.25V
	7 0V	27	4.3V	47	1.31V	67	1.3V
	8 0V	28	3.8V	48	NC	68	GND
	9 6.6V	29	1.5V	49	3.3V	69	15.5V
	10 6.6V	30	0V	50	3.3V	70	15.5V
	11 6.6V	31	0V	51	3.26V	71	15.1V
	12 6.6V	32	1.2V	52	1.64V	72	13.9V
	13 6.6V	33	1.36V	53	GND	73	11.8V
	14 6.6V	34	1.2V	54	0V	74	11.3V
	15 6.6V	35	1.35V	55	0.3V	75	11.1V
	16 6.6V	36	1.2V	56	NC	76	10.8V
	17 6.6V	37	1.32V	57	1.28V	77	10.7V
	18 6.6V	38	1.24V	58	1.28V	78	10.4V
	19 6.6V	39	1.31V	59	NC	79	8.5V
	20 6.6V	40	1.24V	60	NC	80	GND

CN4.CN5输出排线实测电压值

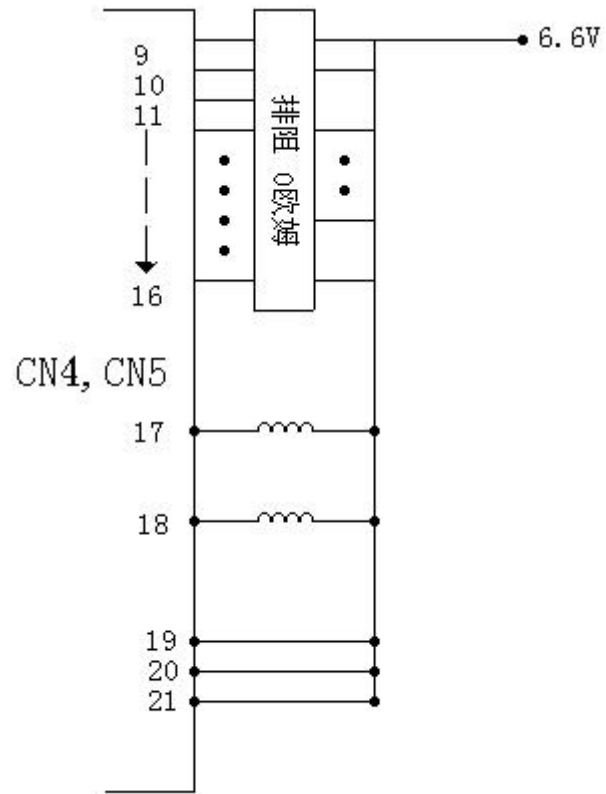


脚位	电压值	脚位	电压值	脚位	电压值	脚位	电压值
CN5	1 GND	21 6.6V	41 1.32V	61 1.34V			
	2 负1.6VGL	22 7.5V	42 1.23V	62 1.24V			
CN5	3 31V VGH	23 5.5V	43 1.32V	63 1.3V			
	4 0V	24 5.1V	44 1.24V	64 1.25V			
	5 0V	25 4.9V	45 1.32V	65 1.3V			
	6 0.8V	26 4.7V	46 1.24V	66 1.25V			
	7 0V	27 4.3V	47 1.31V	67 1.3V			
	8 3.26v	28 3.8V	48 NC	68 GND			
	9 6.6V	29 1.5V	49 3.3V	69 15.5V			
	10 6.6V	30 0V	50 3.3V	70 15.5V			
	11 6.6V	31 0V	51 3.26V	71 15.1V			
	12 6.6V	32 1.2V	52 1.64V	72 13.9V			
	13 6.6V	33 1.36V	53 GND	73 11.8V			
	14 6.6V	34 1.2V	54 0V	74 11.3V			
	15 6.6V	35 1.35V	55 0.3V	75 11.1V			
	16 6.6V	36 1.2V	56 NC	76 10.8V			
	17 6.6V	37 1.32V	57 1.28V	77 10.7V			
	18 6.6V	38 1.24V	58 1.28V	78 10.4V			
	19 6.6V	39 1.31V	59 NC	79 8.5V			
	20 6.6V	40 1.24V	60 NC	80 GND			

CN4,CN5输出排线主要信号脚位

- 32---39脚： TTL8位R0--R7 OUT;
- 40---47脚： TTL8位G0--G7 OUT;
- 60---67脚： TTL8位B0--B7 OUT;
- 69,70---79脚： GAMMA灰度校正， GM0—GM9 OUT. 15.5V----8.5V递减。

CN4,CN5输出排线9---21供电



谢谢观赏!

欢迎批评指正! 探讨!

Zuozhe:songchuanyong

QQ:514469471

scyong2004@163.com

2009-06-01