



ASIC1810

RGB 逐行扫描专用芯片

规格书

December 2001

Version 1.0

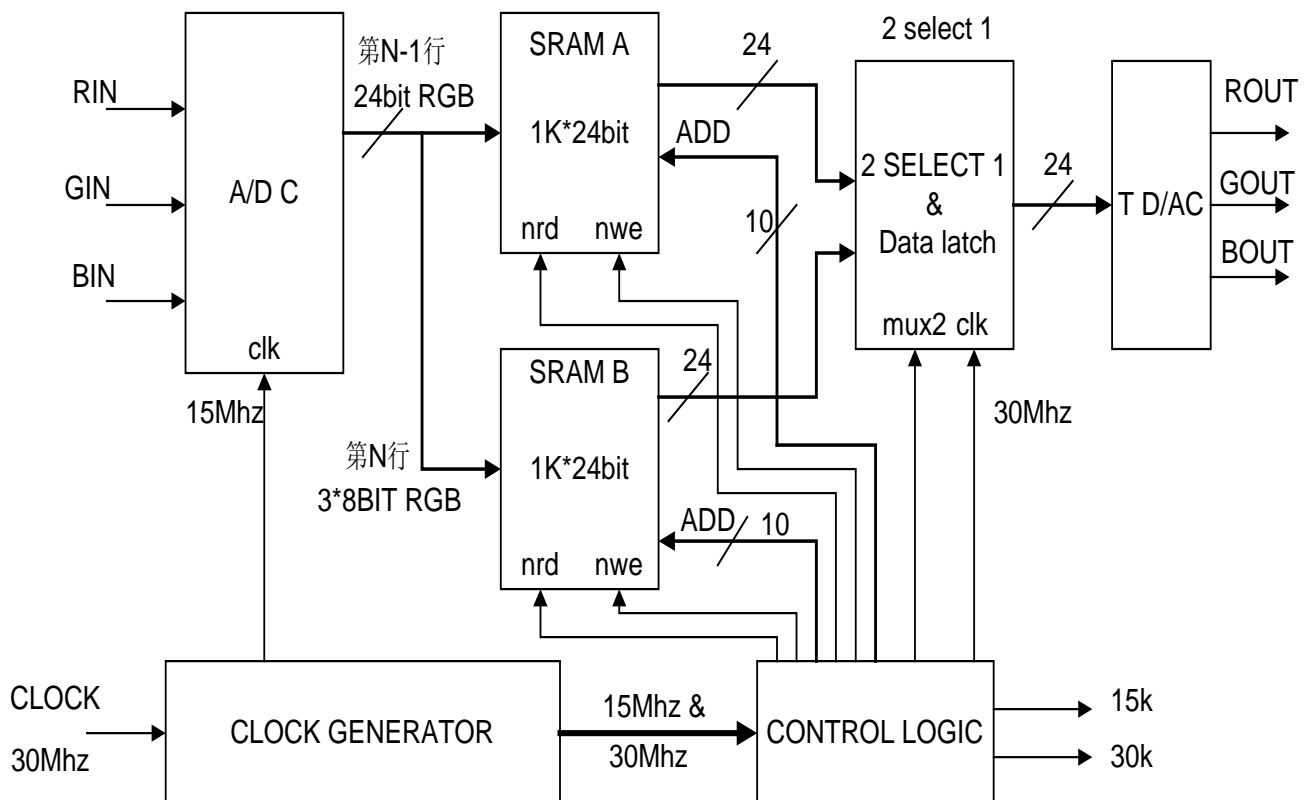
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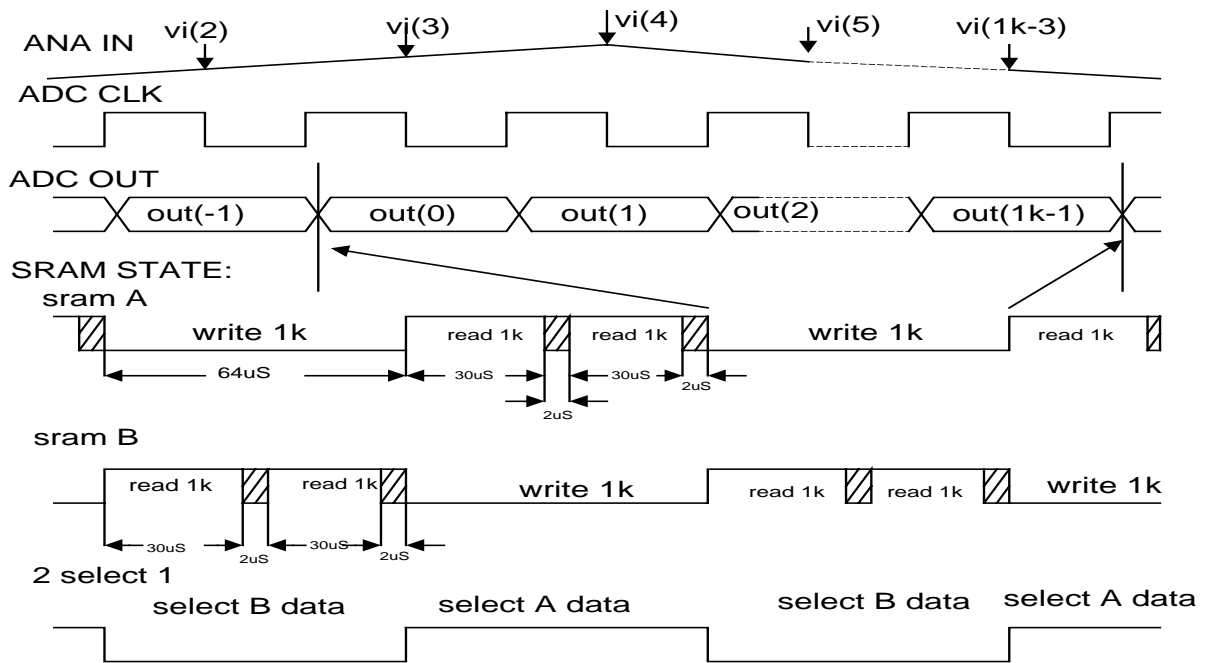
ASIC1810 RGB 逐行扫描专用芯片

视频 ADC 芯片，R、G、B 3CHANNEL，每 CHANNEL 有 2 个 1K*8bit SRAM，SRAM WRITE CYCLE TIME 64nS，SRAM READ CYCLE TIME 32nS。每行采样 1000 个像素点，两个 SRAM 交替读写，当把第 N 行像素点数据写入一个 SRAM，同时从另一个 SRAM 中把第 N-1 行数据读出，读完一次，再读一次，一共读俩次，每行读周期 30uS，有 2uS 的回程时间；每行写周期 64uS。

RIN、GIN、BIN 行同步频率 15KHZ，图像时间为 53uS，回程时间 11uS；经 ASIC 后，ROUT、GOUT、BOUT 行同步频率 30KHZ，回程时间 2uS。

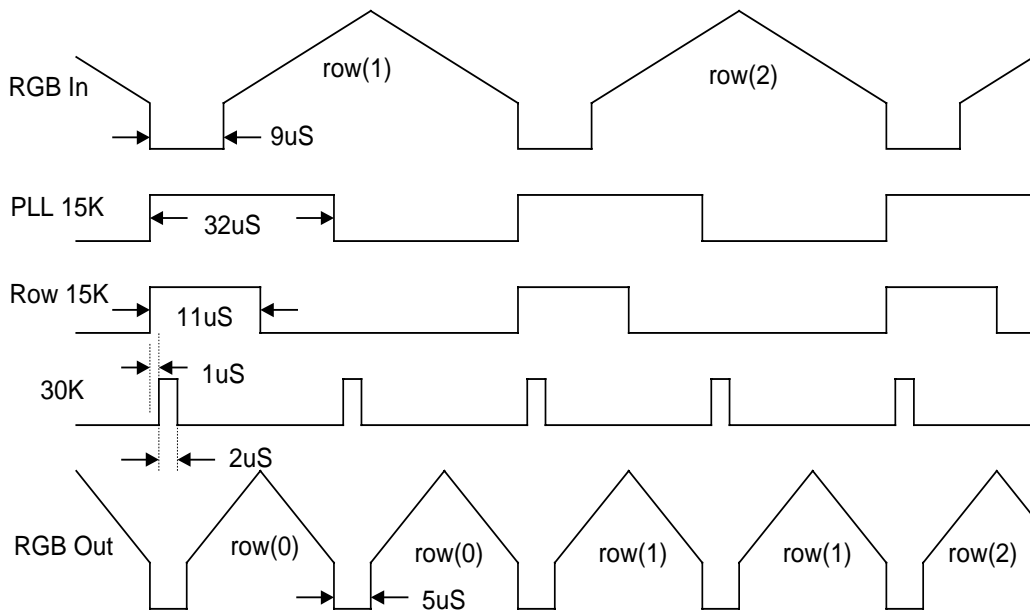
系统方框图：





时序图:

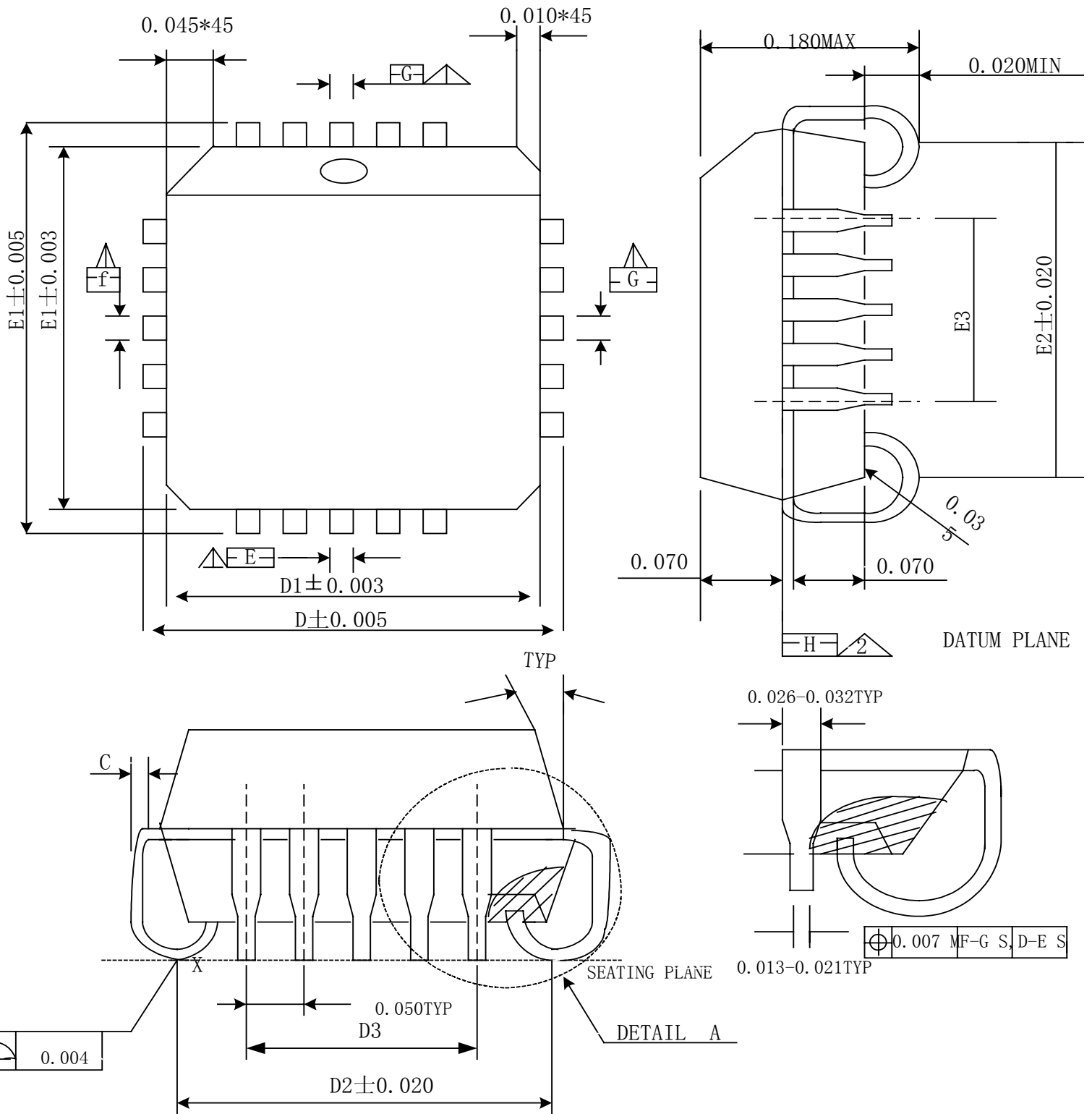
Timing Chart:



Pin Configuration:



		NC	NC	AVDD	BRTS	BRT	AVDD	BIN	AVSS	AVSS	BRBS	BRB	NC	NC		
	○	7	6	5	4	3	2	1	52	51	50	49	48	47		
CRB	8													46	AVDD	
CRBS	9													45	ARTS	
AVSS	10													44	ART	
AVSS	11													43	AVDD	
CIN	12													42	AIN	
AVDD	13													41	AVSS	
CRT	14						PLCC	52						40	AVSS	
CRTS	15													39	ARBS	
AVDD	16													38	ARB	
DVDD	17													37	DVDD	
15KB	18													36	NC	
30KB	19													35	NC	
DVSS	20													34	DVSS	
		21	22	23	24	25	26	27	28	29	30	31	32	33		
		NC	DVSS	COUT	DVDD	BVSS	30M	DVDD	BVSS	BOUT	DVDD	BVSS	AOUT	DVDD		



SYMBOL	LEAD COUNT					
	20L	28L	44L	52L	68L	84L



D	0. 390	0. 490	0. 690	0. 790	0. 990	0. 190
D1	0. 353	0. 453	0. 653	0. 753	0. 953	1. 153
D2	0. 310	0. 410	0. 610	0. 710	0. 910	1. 110
D3	0. 200	0. 300	0. 500	0. 600	0. 800	1. 000
E	0. 390	0. 490	0. 690	0. 790	0. 990	1. 190
E1	0. 353	0. 453	0. 653	0. 753	0. 953	1. 153
E2	0. 310	0. 410	0. 610	0. 710	0. 910	1. 110
E3	0. 200	0. 300	0. 500	0. 600	0. 800	1. 000
C	0. 010	0. 010	0. 010	0. 010	0. 008	0. 008

NOTES:

1 DATUMS D-E AND F-G TO BE DETERMINED WHERE LEADS EXIT PLASTIC BODY AT DATUM PLANE H.

2 DATUM PLANE H LOCATED AT TOP OF MOLD PARTING LINE AND COINCIDENT WITH TOP OF LEAD .WHERE LEAD EXITS PLASTIC BODY.

ASE		SCALE	X	PROL	
PACKAGE OPTUNE 20/28/44/52/68/84L PLCC		DVG. ND			REF
		64-06-A000-PL02			A
		SHEET		BTEE	
		1 OF 2		A4	
UNIT	TOLERANCE		PERVENCH DOCUMENT		
	DIWENSION	ANGLE			
INCH			JEDEC SPEC WO-047,M-AF		

Pin Description:

Pin No.	Name	Function
17, 24, 27, 30, 33, 37	DVDD	Digital Power Supply
20, 22, 34	DVSS	Digital Ground
2, 5, 13, 16, 43, 46	AVDD	Analog Power Supply



10, 11, 40, 41, 51, 52	AVSS	Analog Ground
39	ARBS	Short with ARB generates 0.6V
50	BRBS	Short with BRB generates 0.6V
9	CRBS	Short with CRB generates 0.6V
38 49 8	ARB BRB CRB	Reference Voltage (bottom)
44 3 14	ART BRT CRT	Reference Voltage (top)
45	ARTS	Short with ART generates 2.6V
4	BRTS	Short with BRT generates 2.6V
15	CRTS	Short with CRT generates 2.6V
42 1 12	AIN BIN CIN	Analog Input
32 29 23	AOUT BOUT COUT	Analog Output
26	30M	Clock Input
19	30KB	Clock Output
18	15KB	Clock Output

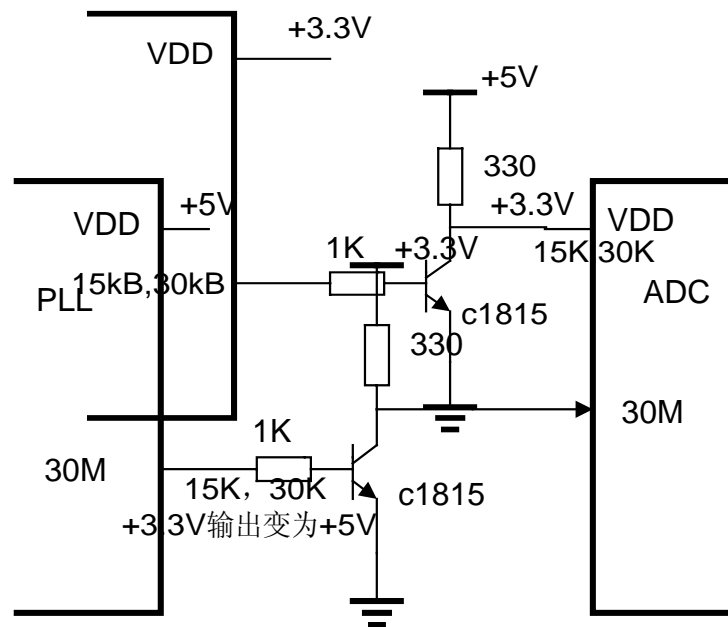
DC Characteristics (OSCIN=30MHz, AVDD=3.3V, DVDD=3.3V, V_{RB}=0.6V, V_{RT}=2.6V, T_A=+25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Supply Current	I _{AD} +I _{DD}	Ramp wave input Fin=1MHz		99		mA
	I _{AD}			90		
	I _{DD}			9		
Reference Current	I _{REF}	For every channel		7		mA
Reference Resistance	R _{REF}	For every channel		300		Ω
Self-bias	V _{RB}	Shorts AVSS and ARBS, BRBS, CRBS		0.6		



	VRT-VRB	ARBS, BRBS, CRBS Shorts AVDD and ARTS, BRTS, CRTS		2		V
Analog Input	Capacitance	Ain Bin Cin		15		pF
	Voltage Range			2		Vp-p
Power Consumption				326		mW
Temperature Range			0	25	75	°C
Analog Output	Voltage	Connecting 33K Resistance	0	---	3.18	V
	Current		0	---	96.4	uA
Logic output (15K, 30K)	IOL	VOL=0.4v		4.39		mA
	IOH	VOH=2.4v		-5.74		

APPLICATION



PLL OUTPUT 30M
+5V输出变为+3.3V

