Amendment history of SSD1325 Specification

Revision	Description of any change	Issued	Effective
0.10 A5MA1 16-JUL-03	PRELIMINARY EDITION Approver list: Product Marketing-Raymond Ho Design Engineering-Ricky Ng Product Engineering-Bryan Ma Quality & Manufacturing-Frank Leung	Jeffrey Young	23-Jul-03
0.20 A5MA3 20-Oct-03	Remove programmable feature for VSL in page 1 Revised display offset description Remove VSL command and command description Remove confidential watermark Revise ordering information page Add SSD1325UR1 and SSD1325T3R1 package information Approver list: Product Marketing-Raymond Ho Design Engineering-Ricky Ng Product Engineering-Bryan Ma Quality & Manufacturing-Frank Leung	Jeffrey Young	30-Oct-03
1.0 A7MB1 12-Jul-04	Release Advance info Copy from SSD0323_v1.1 spec Remove VSL commend in commend table Add T3R1 and UR1 info Revise T3 & U cut line tolerance Approver list: Product Marketing-Raymond Ho Design Engineering-Ricky Ng Product Engineering-Jeffrey Young Quality & Manufacturing-Frank Leung	Jack Tsang	11-Aug-04
1.1 A7MB1 15-Dec-04	Add U2 info Approver list: Product Marketing-Raymond Ho Design Engineering-Ricky Ng Product Engineering-Jeffrey Young Quality & Manufacturing-Frank Leung	Jack Tsang	03-Jan-05
1.2 A7MB1 30-Aug-05	Add T1 and T6 info Approver list: Product Marketing-Raymond Ho Design Engineering-Ricky Ng Product Engineering-Jeffrey Young Quality & Manufacturing-Frank Leung	Jack Tsang	03-Oct-05
1.3 A7MB2 01-Feb-06	1. Added application example for SSD1325T1R1 2. Revised command B1h, B3h, BCh, BEh 3. Removed command CFh 4. Revised command descriptions: “Set Row Period” and “Set Display Clock Divide Ratio” 5. Revised Table 25 SSD1325U2 pin assignment 6. Revised V_{COMH} part in Table 16 Maximum ratings 7. Added V_{COMH} part in Table 17 DC Characteristics	Ada Ng	06-Feb-06

Revision	Description of any change	Issued	Effective
	8. Corrected the SCLK(D_0) waveform in Figure 11 Serial Interface Characteristic: Original:  Now:  Approver list: Product Marketing-Raymond Ho Design Engineering-Ricky Ng Product Engineering-Jeffrey Young Quality & Manufacturing-Frank Leung		
1.4 A7MB2 22-Aug-06	1. Add Graphic Acceleration Commands : 23h Graphic Command Options 24h Graphic Command : Draw Rectangle 25h Graphic Command : Copy Rectangle 26h Graphic Command : Horizontal Scroll 2Eh Graphic Command : stop moving 2Fh Graphic Command : start moving 2. Revise AEh, AFh, B8h in command table 3. Correct pin 31 of SSD1325T1R1 from VSL to NC 4. Remove VSL pin in SSD1325T1R1 application diag 5. Revise SSD1325 die drawing and pad coordinate 6. Replace POR by Reset 7. Revise Maximum rating 8. Add a note on capacitor value on application example 9. Add a note about Fosc under Table 18 10. Add a note in B1 command (0 DCLK is invalid in Phase 1&2) 11. Revise D/C#, CL pin description 12. Revise MCU interface 13. Revise Dev value (Overall pin to pin) in Table 23 - DC Characteristics (Changes for removing external V_{COMH}) 14. Revise Block Diagram (V_{COMH} is pointing out) 15. Revise V_{COMH} pin description 16. Update command ADh (No external V_{COMH} option) 17. Update command BEh Set V_{COMH} voltage (removed set V_{COMH} to 1*V_{ref}) 18. No V_{COMH} info in table 16 Maximum ratings 19. No V_{COMH} info in Table 17 DC Characteristics 20. Remove the "pointing-inside arrow" of V_{COMH} pin in Application Example. 21. Remove VIH and VIL test condition in Table 17- DC Characteristic Approver list: Product Marketing-Raymond Ho Design Engineering-Ricky Ng Product Engineering-Jeffrey Young Quality & Manufacturing-Daniel Ho	Ada Ng	04-Sep-06
1.5 A7MB2 27-Sep-06	1) Add power on OFF sequence (reference:SSD1303 rev2.4) 2) Add RESET timing in Table 24 AC Characteristics (reference: SSD1303 rev2.4) Approver list: Product Marketing-Jack Tsang Design Engineering-Ricky Ng Product Engineering-Jeffrey Young Quality & Manufacturing-Daniel Ho	Ada Ng	05-Oct-06
1.6 A7MB2 18-Oct-06	1) Revise hex code of AEh in command table 2) Revise Figure 1 – Segment current vs Contrast setting 3) Revise command description of Set Contrast Control Register Approver list: Product Marketing-Jack Tsang	Ada Ng	24-Oct-06

Revision	Description of any change	Issued	Effective
	Design Engineering-Ricky Ng Product Engineering-Jeffrey Young Quality & Manufacturing-Daniel Ho		
1.7 A7MB2 26-Jul-07	1) Add commands B0h and B4h (source: SSD0323 rev1.6) 2) The title of "Set DC-DC Converter" description is changed to "Set Master Configuration" on page 32 3) Add note in ADh Set Master Configuration command table Approver list: Product Marketing-Bryan Ma Design Engineering-Ricky Ng Product Engineering-Johnkid Lo Quality & Manufacturing-Daniel Ho Test/TPE Engineering – Stephen Leung	Ada Ng	03-Jul-07
1.8 A7MB2 06-Aug-07	1. Revise pin description of VSL and VSLCAP pin 2. Move SSD1325UR1, SSD1325T3R1, SSD1325U2 and SSD1325T1R1 dwg to appendix 3. Revise application example from SSD1325T1R1 to SSD1325T6R1 4. Add light sensitivity command under Table 22- Maximum Ratings 5. Add commands BFh in command table, VSL pin description & application example Approver list: Product Marketing-Bryan Ma Design Engineering-Ricky Ng Product Engineering-Johnkid Lo Quality & Manufacturing-Daniel Ho Test/TPE Engineering – Stephen Leung	Ada Ng	08-Aug-07
1.9 A7MB2 16-Oct-07	1. Add a Remark column in the Ordering Information table 2. Remove the internal DC-DC block from the SSD1325 Block Diagram 3. Amend the die size 4. Update the Pin Description table, add pin descriptions for FR and DOF# 5. Remove the internal DC-DC voltage converter and its corresponding information from Advance Info to Appendix 6. Add details on section 8.2 (Segment drivers / Common drivers) 7. Add details on section 8.6 (Current Control and Voltage Control) 8. Revise the Command Table (ADh, …) 9. Revise sections 10.1.6 (Set Display Start Line (A1h)) & 10.1.7 (Set Display Offset (A2h)) by adding examples 10. Revise section 10.1.10 (Set Master Configuration (ADh)) 11. Add Remark on section 15.1 SSD1325Z Die Tray Information 12. Add SSD1325T2R1 dwg and corresponding information to appendix 13. Add application example of SSD1325Z SPI serial interface 14. Revise the adjacent pin uniformity limit to +/-1.5% 15. Revise the typo errors 16. Update the datasheet format for standardization Approver list: Product Marketing-Bryan Ma Design Engineering-Ricky Ng Product Engineering-Johnkid Lo Quality & Manufacturing-Daniel Ho Test/TPE Engineering – Stephen Leung	Ada Ng	16-Oct-07

Revision	Description of any change	Issued	Effective
2.0 A7MB2 12-Dec-07	1. Amend the die size 2. Revise the die tray information Approver list: Product Marketing-Bryan Ma Design Engineering-Ricky Ng Product Engineering-Johnkid Lo Quality & Manufacturing-Daniel Ho Test/TPE Engineering – Stephen Leung	Ada Ng	19-Dec-07
2.1 A7MB2 13-May-08	1. Revise default value in BCh & BEh command table 2. Remove below figures: Figure 30 : V_{COMH} Vs Bit Value Figure 31 : V_P Vs Bit Value 2. Add and Revise Power ON OFF sequence notes (2~5) Approver list: Product Marketing-Raymond Ho Design Engineering-Ricky Ng Product Engineering-Johnkid Lo Quality & Manufacturing-Daniel Ho Test/TPE Engineering – Stephen Leung	Ada Ng	15-May-08

SSD1325

Advance Information

128 x 80, 16 Gray Scale Dot Matrix OLED/PLED Segment/Common Driver with Controller

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1 GENERAL DESCRIPTION

SSD1325 is a single-chip CMOS OLED/PLED driver with controller for organic/polymer light emitting diode dot-matrix graphic display system. It consists of 208 high voltage/current driving output pins for driving 128 segments and 80 commons. This IC is designed for Common Cathode type OLED/PLED panel.

SSD1325 displays data directly from its internal 128x80x4 bits Graphic Display Data RAM (GDDRAM). Data/Commands are sent from general MCU through the hardware selectable 6800-/8080-series compatible Parallel Interface or Serial Peripheral Interface.

It has a 128-step contrast control and a 16 gray level control. The embedded on-chip oscillator and DC-DC voltage converter reduce the number of external components.

2 FEATURES

- Support max. 128 x 80 matrix panel
- Power supply: V_{DD} =2.4V - 3.5V
  V_{CC} =8.0V - 16.0V
- For matrix display:
  - OLED driving output voltage, 14V maximum
  - Can output maximum segment source current: 300uA
  - Common maximum sink current: 40mA
- Embedded 128 x 80 x 4 bit SRAM display memory
- 128 step contrast current control on monochrome passive OLED panel
- 16 gray scale
- Internal Oscillator
- Programmable Frame Rate
- 8-bit 6800-series Parallel Interface, 8080-series Parallel Interface, Serial Peripheral Interface.
- Row re-mapping and Column re-mapping
- Low power consumption (<5.0uA @sleep mode)
- Wide range of operating temperature: -40 to 85 °C

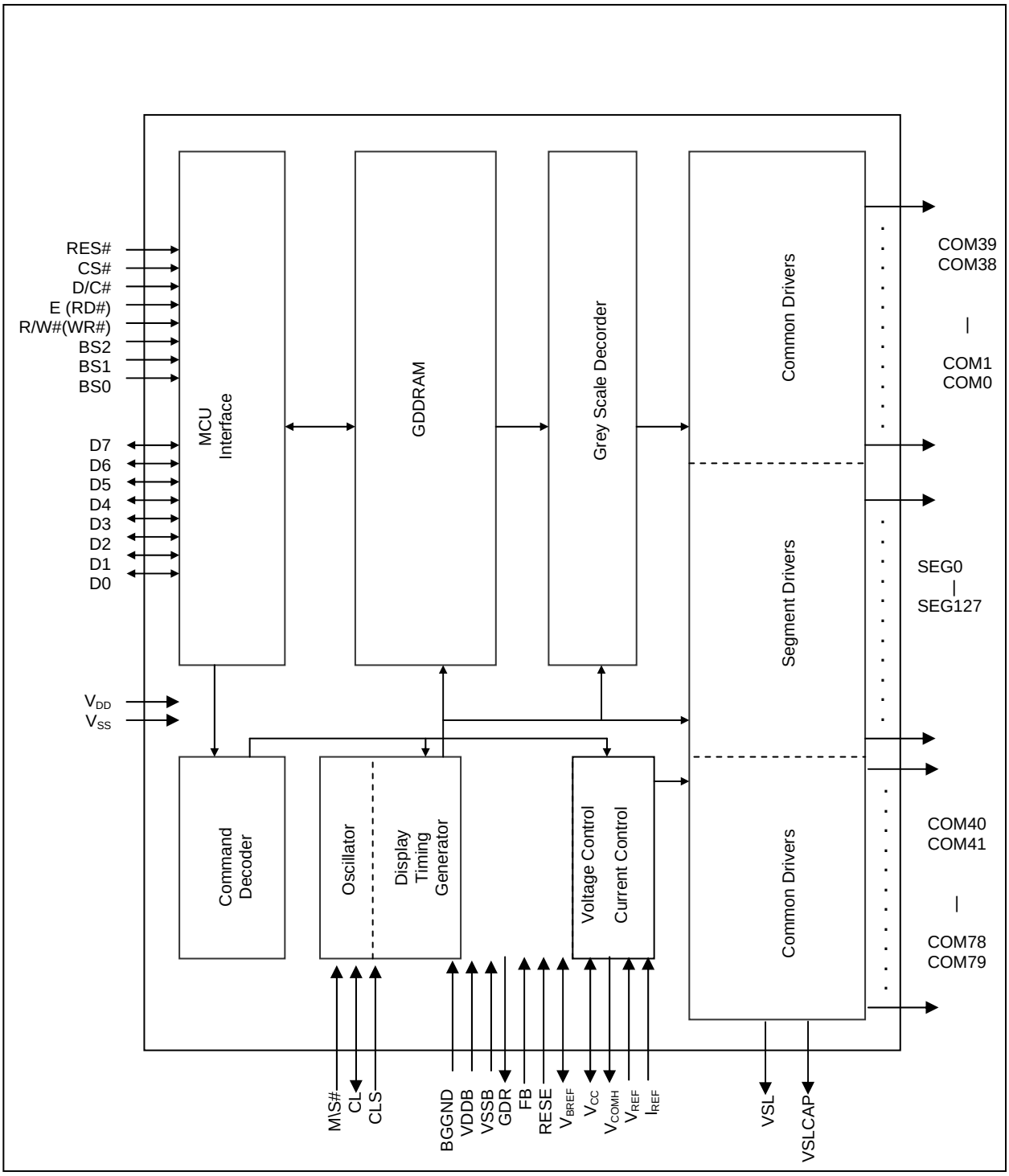
3 ORDERING INFORMATION

Table 1 : Ordering Information

Ordering Part Number	SEG	COM	Package Form	Reference	Remarks
SSD1325Z	128	80	COG	Page 8, 57	• Min SEG pad pitch: 52.2um • Min COM pad pitch: 51.8um
SSD1325T6R1	128	80	TAB	Page 58	• 8-bit 80 / 68 / SPI interface • Output lead pitch: 0.12mm x 0.998 = 0.11976mm • 4 SPH, 35m film • Full resolution 128 x 80

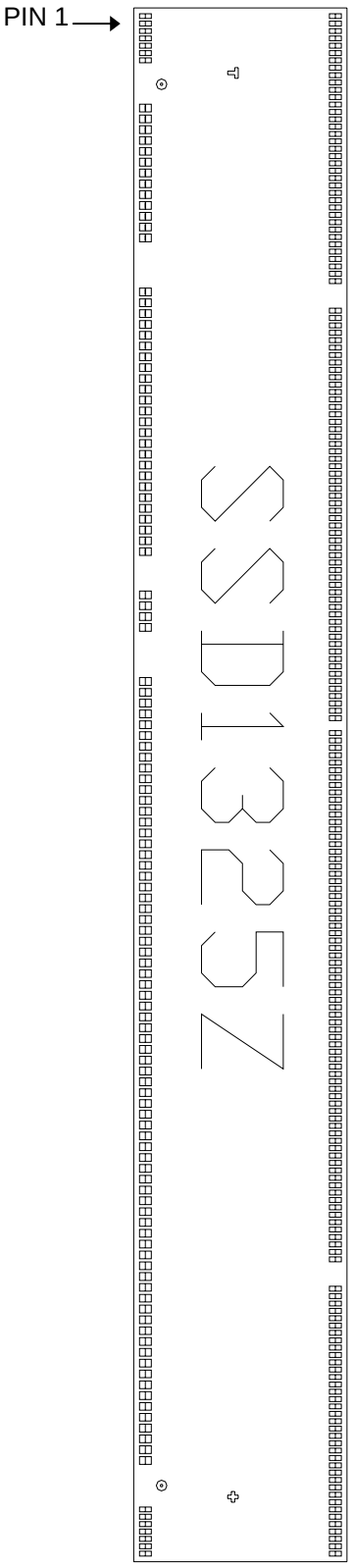
4 BLOCK DIAGRAM

Figure 1 : SSD1325 Block Diagram



5 DIE PAD FLOOR PLAN

Figure 2 : SSD1325Z Die Drawing



Note

[1] + represents the centre of the alignment mark

Alignment Mark	X-pos (µm)	Y-pos (µm)
o Shape	4934.100	-557.675
	-4934.100	-557.675
+ shape	5014.100	-52.200
T shape	-5014.100	-52.200

Die Size	10942um x 1508um
Die Thickness	457 +/- 25um
I/O pad pitch	76.2um
SEG pad pitch	52.2um
COM pad pitch	51.8um
Bump Height	Nominal 18um

Bump size	**X (um)**	**Y (um)**
Pad 1-7,123-331	34	84
Pad 8-122	54	84

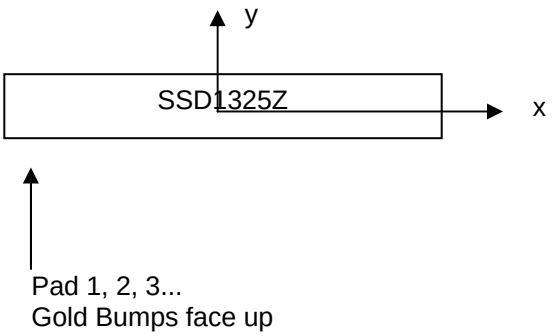


Figure 3 : SSD1325Z Alignment Mark Dimensions

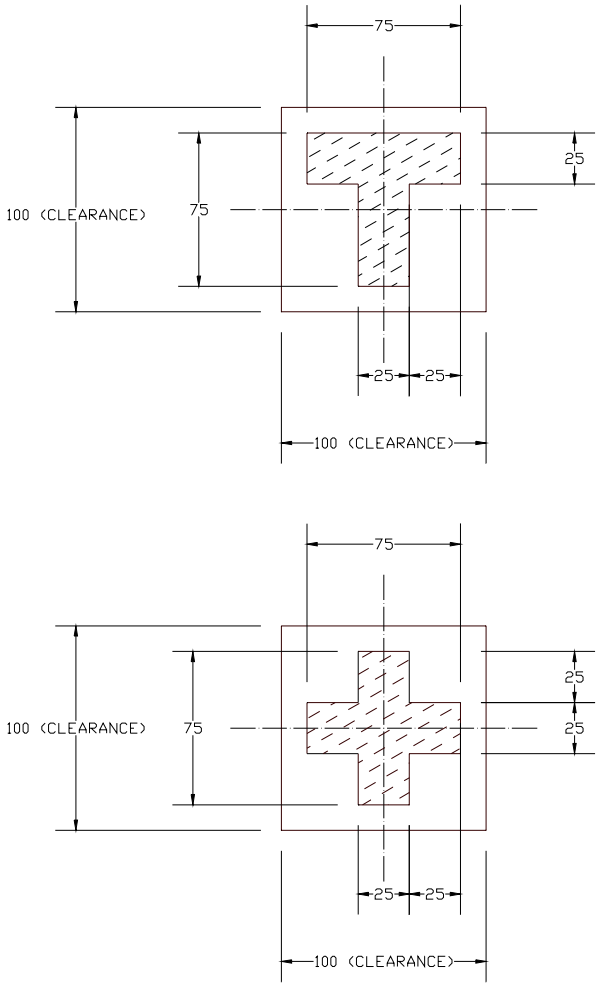


Table 2 : SSD1325Z Bump Die Pad Coordinates

Pad#	Signal	X-pos	Y-pos
1	DUMMY	-5414.000	-672.075
2	DUMMY	-5361.800	-672.075
3	COM75	-5309.600	-672.075
4	COM76	-5257.800	-672.075
5	COM77	-5206.000	-672.075
6	COM78	-5154.200	-672.075
7	COM79	-5102.400	-672.075
8	DUMMY	-4767.075	-672.075
9	DUMMY	-4690.875	-672.075
10	DUMMY	-4614.675	-672.075
11	DUMMY	-4538.475	-672.075
12	DUMMY	-4462.275	-672.075
13	DUMMY	-4386.075	-672.075
14	DUMMY	-4309.875	-672.075
15	DUMMY	-4233.675	-672.075
16	DUMMY	-4157.475	-672.075
17	DUMMY	-4081.275	-672.075
18	DUMMY	-4005.075	-672.075
19	DUMMY	-3928.875	-672.075
20	DUMMY	-3852.675	-672.075
21	VCL	-3471.675	-672.075
22	VCL	-3395.475	-672.075
23	VCL	-3319.275	-672.075
24	VSS	-3243.075	-672.075
25	VSSB	-3166.875	-672.075
26	VSSB	-3090.675	-672.075
27	VSL	-3014.475	-672.075
28	VSLCAP	-2938.275	-672.075
29	VSLCAP	-2862.075	-672.075
30	VDD	-2785.875	-672.075
31	VCC	-2709.675	-672.075
32	VCC	-2633.475	-672.075
33	VCOMH	-2557.275	-672.075
34	VCOMH	-2481.075	-672.075
35	TR8	-2404.875	-672.075
36	TR7	-2328.675	-672.075
37	TR6	-2252.475	-672.075
38	TR5	-2176.275	-672.075
39	TR4	-2100.075	-672.075
40	TR3	-2023.875	-672.075
41	TR2	-1947.675	-672.075
42	TR1	-1871.475	-672.075
43	TR0	-1795.275	-672.075
44	VSS	-1719.075	-672.075
45	VSSB	-1642.875	-672.075
46	GDR	-1338.075	-672.075
47	GDR	-1261.875	-672.075
48	GDR	-1185.675	-672.075
49	GDR	-1109.475	-672.075
50	VDDB	-728.475	-672.075
51	VDDB	-652.275	-672.075
52	VDD	-576.075	-672.075
53	VDD	-499.875	-672.075
54	FB	-423.675	-672.075
55	RESE	-347.475	-672.075
56	VBREF	-271.275	-672.075
57	BGGND	-195.075	-672.075
58	VSS	-118.875	-672.075
59	VCC	-42.675	-672.075
60	GPIO0	33.525	-672.075
61	GPIO1	109.725	-672.075
62	VDD	185.925	-672.075
63	BS0	262.125	-672.075
64	VSS	338.325	-672.075
65	BS1	414.525	-672.075
66	VDD	490.725	-672.075
67	BS2	566.925	-672.075
68	VSS	643.125	-672.075
69	FR	719.325	-672.075
70	CL	795.525	-672.075
71	DOF#	871.725	-672.075
72	VSS	947.925	-672.075
73	CS#	1024.125	-672.075
74	RES#	1100.325	-672.075
75	D/C#	1176.525	-672.075
76	VSS	1252.725	-672.075
77	R/W#(WR#)	1328.925	-672.075
78	E(RD#)	1405.125	-672.075
79	VDD	1481.325	-672.075
80	D0	1557.525	-672.075
81	D1	1633.725	-672.075
82	D2	1709.925	-672.075
83	D3	1786.125	-672.075
84	D4	1862.325	-672.075
85	D5	1938.525	-672.075
86	D6	2014.725	-672.075
87	D7	2090.925	-672.075
88	VSS	2167.125	-672.075
89	M/S#	2243.325	-672.075
90	CLS	2319.525	-672.075
91	VDD	2395.725	-672.075
92	ICAS	2471.925	-672.075
93	IREF	2548.125	-672.075
94	VCOMH	2624.325	-672.075
95	VCOMH	2700.525	-672.075
96	VREF	2776.725	-672.075
97	VCC	2852.925	-672.075
98	VCC	2929.125	-672.075
99	VDD	3005.325	-672.075
100	VSL	3081.525	-672.075
101	VSS	3157.725	-672.075
102	VCL	3233.925	-672.075
103	VCL	3310.125	-672.075
104	VCL	3386.325	-672.075
105	DUMMY	3462.525	-672.075
106	DUMMY	3538.725	-672.075
107	DUMMY	3614.925	-672.075
108	DUMMY	3691.125	-672.075
109	DUMMY	3767.325	-672.075
110	DUMMY	3843.525	-672.075
111	DUMMY	3919.725	-672.075
112	DUMMY	3995.925	-672.075
113	DUMMY	4072.125	-672.075
114	DUMMY	4148.325	-672.075
115	DUMMY	4224.525	-672.075
116	DUMMY	4300.725	-672.075
117	DUMMY	4376.925	-672.075
118	DUMMY	4453.125	-672.075
119	DUMMY	4529.325	-672.075
120	DUMMY	4605.525	-672.075
121	DUMMY	4681.725	-672.075
122	DUMMY	4757.925	-672.075
123	COM39	5102.400	-672.075
124	COM38	5154.200	-672.075
125	COM37	5206.000	-672.075
126	COM36	5257.800	-672.075
127	COM35	5309.600	-672.075
128	DUMMY	5361.800	-672.075
129	DUMMY	5414.000	-672.075
130	DUMMY	5414.000	672.075
131	DUMMY	5361.800	672.075
132	COM34	5309.600	672.075
133	COM33	5257.800	672.075
134	COM32	5206.000	672.075
135	COM31	5154.200	672.075
136	COM30	5102.400	672.075
137	COM29	5050.600	672.075
138	COM28	4998.800	672.075
139	COM27	4947.000	672.075
140	COM26	4895.200	672.075
141	COM25	4843.400	672.075
142	COM24	4791.600	672.075
143	COM23	4739.800	672.075
144	COM22	4688.000	672.075
145	COM21	4636.200	672.075
146	COM20	4584.400	672.075
147	COM19	4532.600	672.075
148	COM18	4480.800	672.075
149	COM17	4429.000	672.075
150	COM16	4377.200	672.075
151	COM15	4325.400	672.075
152	COM14	4273.600	672.075
153	COM13	4221.800	672.075
154	COM12	4170.000	672.075
155	COM11	4118.200	672.075
156	COM10	4066.400	672.075
157	COM9	4014.600	672.075
158	COM8	3962.800	672.075
159	COM7	3911.000	672.075
160	COM6	3859.200	672.075
161	COM5	3807.400	672.075
162	COM4	3755.600	672.075
163	COM3	3703.800	672.075
164	COM2	3652.000	672.075
165	COM1	3600.200	672.075
166	COM0	3548.400	672.075
167	SEG0	3340.800	672.075
168	SEG1	3288.600	672.075
169	SEG2	3236.400	672.075
170	SEG3	3184.200	672.075
171	SEG4	3132.000	672.075
172	SEG5	3079.800	672.075
173	SEG6	3027.600	672.075
174	SEG7	2975.400	672.075
175	SEG8	2923.200	672.075
176	SEG9	2871.000	672.075
177	SEG10	2818.800	672.075
178	SEG11	2766.600	672.075
179	SEG12	2714.400	672.075
180	SEG13	2662.200	672.075
181	SEG14	2610.000	672.075
182	SEG15	2557.800	672.075
183	SEG16	2505.600	672.075
184	SEG17	2453.400	672.075
185	SEG18	2401.200	672.075
186	SEG19	2349.000	672.075
187	SEG20	2296.800	672.075
188	SEG21	2244.600	672.075
189	SEG22	2192.400	672.075
190	SEG23	2140.200	672.075
191	SEG24	2088.000	672.075
192	SEG25	2035.800	672.075
193	SEG26	1983.600	672.075
194	SEG27	1931.400	672.075
195	SEG28	1879.200	672.075
196	SEG29	1827.000	672.075
197	SEG30	1774.800	672.075
198	SEG31	1722.600	672.075
199	SEG32	1670.400	672.075
200	SEG33	1618.200	672.075
201	SEG34	1566.000	672.075
202	SEG35	1513.800	672.075
203	SEG36	1461.600	672.075
204	SEG37	1409.400	672.075
205	SEG38	1357.200	672.075
206	SEG39	1305.000	672.075
207	SEG40	1252.800	672.075
208	SEG41	1200.600	672.075
209	SEG42	1148.400	672.075
210	SEG43	1096.200	672.075
211	SEG44	1044.000	672.075
212	SEG45	991.800	672.075
213	SEG46	939.600	672.075
214	SEG47	887.400	672.075
215	SEG48	835.200	672.075
216	SEG49	783.000	672.075
217	SEG50	730.800	672.075
218	SEG51	678.600	672.075
219	SEG52	626.400	672.075
220	SEG53	574.200	672.075
221	SEG54	522.000	672.075
222	SEG55	469.800	672.075
223	SEG56	417.600	672.075
224	SEG57	365.400	672.075
225	SEG58	313.200	672.075
226	SEG59	261.000	672.075
227	SEG60	208.800	672.075
228	SEG61	156.600	672.075
229	SEG62	104.400	672.075
230	SEG63	52.200	672.075
231	SEG64	0.000	672.075
232	SEG65	-52.200	672.075
233	SEG66	-104.400	672.075
234	SEG67	-156.600	672.075
235	SEG68	-208.800	672.075
236	SEG69	-261.000	672.075
237	SEG70	-313.200	672.075
238	SEG71	-365.400	672.075
239	SEG72	-469.800	672.075
240	SEG73	-522.000	672.075
241	SEG74	-574.200	672.075
242	SEG75	-626.400	672.075
243	SEG76	-678.600	672.075
244	SEG77	-730.800	672.075
245	SEG78	-783.000	672.075
246	SEG79	-835.200	672.075
247	SEG80	-887.400	672.075
248	SEG81	-939.600	672.075
249	SEG82	-991.800	672.075
250	SEG83	-1044.000	672.075
251	SEG84	-1096.200	672.075
252	SEG85	-1148.400	672.075
253	SEG86	-1200.600	672.075
254	SEG87	-1252.800	672.075
255	SEG88	-1305.000	672.075
256	SEG89	-1357.200	672.075
257	SEG90	-1409.400	672.075
258	SEG91	-1461.600	672.075
259	SEG92	-1513.800	672.075
260	SEG93	-1566.000	672.075
261	SEG94	-1618.200	672.075
262	SEG95	-1670.400	672.075
263	SEG96	-1722.600	672.075
264	SEG97	-1774.800	672.075
265	SEG98	-1827.000	672.075
266	SEG99	-1879.200	672.075
267	SEG100	-1931.400	672.075
268	SEG101	-1983.600	672.075
269	SEG102	-2035.800	672.075
270	SEG103	-2088.000	672.075
271	SEG104	-2140.200	672.075
272	SEG105	-2192.400	672.075
273	SEG106	-2244.600	672.075
274	SEG107	-2296.800	672.075
275	SEG108	-2349.000	672.075
276	SEG109	-2401.200	672.075
277	SEG110	-2453.400	672.075
278	SEG111	-2505.600	672.075
279	SEG112	-2557.800	672.075
280	SEG113	-2610.000	672.075
281	SEG114	-2662.200	672.075
282	SEG115	-2714.400	672.075
283	SEG116	-2766.600	672.075
284	SEG117	-2818.800	672.075
285	SEG118	-2871.000	672.075
286	SEG119	-2923.200	672.075
287	SEG120	-2975.400	672.075
288	SEG121	-3027.600	672.075
289	SEG122	-3079.800	672.075
290	SEG123	-3132.000	672.075
291	SEG124	-3184.200	672.075
292	SEG125	-3236.400	672.075
293	SEG126	-3288.600	672.075
294	SEG127	-3340.800	672.075
295	COM40	-3548.400	672.075
296	COM41	-3600.200	672.075
297	COM42	-3652.000	672.075
298	COM43	-3703.800	672.075
299	COM44	-3755.600	672.075
300	COM45	-3807.400	672.075
301	COM46	-3859.200	672.075
302	COM47	-3911.000	672.075
303	COM48	-3962.800	672.075
304	COM49	-4014.600	672.075
305	COM50	-4066.400	672.075
306	COM51	-4118.200	672.075
307	COM52	-4170.000	672.075
308	COM53	-4221.800	672.075
309	COM54	-4273.600	672.075
310	COM55	-4325.400	672.075
311	COM56	-4377.200	672.075
312	COM57	-4429.000	672.075
313	COM58	-4480.800	672.075
314	COM59	-4532.600	672.075
315	COM60	-4584.400	672.075
316	COM61	-4636.200	672.075
317	COM62	-4688.000	672.075
318	COM63	-4739.800	672.075
319	COM64	-4791.600	672.075
320	COM65	-4843.400	672.075
321	COM66	-4895.200	672.075
322	COM67	-4947.000	672.075
323	COM68	-4998.800	672.075
324	COM69	-5050.600	672.075
325	COM70	-5102.400	672.075
326	COM71	-5154.200	672.075
327	COM72	-5206.000	672.075
328	COM73	-5257.800	672.075
329	COM74	-5309.600	672.075
330	DUMMY	-5361.800	672.075
331	DUMMY	-5414.000	672.075

6 PIN ARRANGEMENT

6.1 SSD1325T6R1 pin assignment

Figure 4 : SSD1325T6R1 Pin Assignment

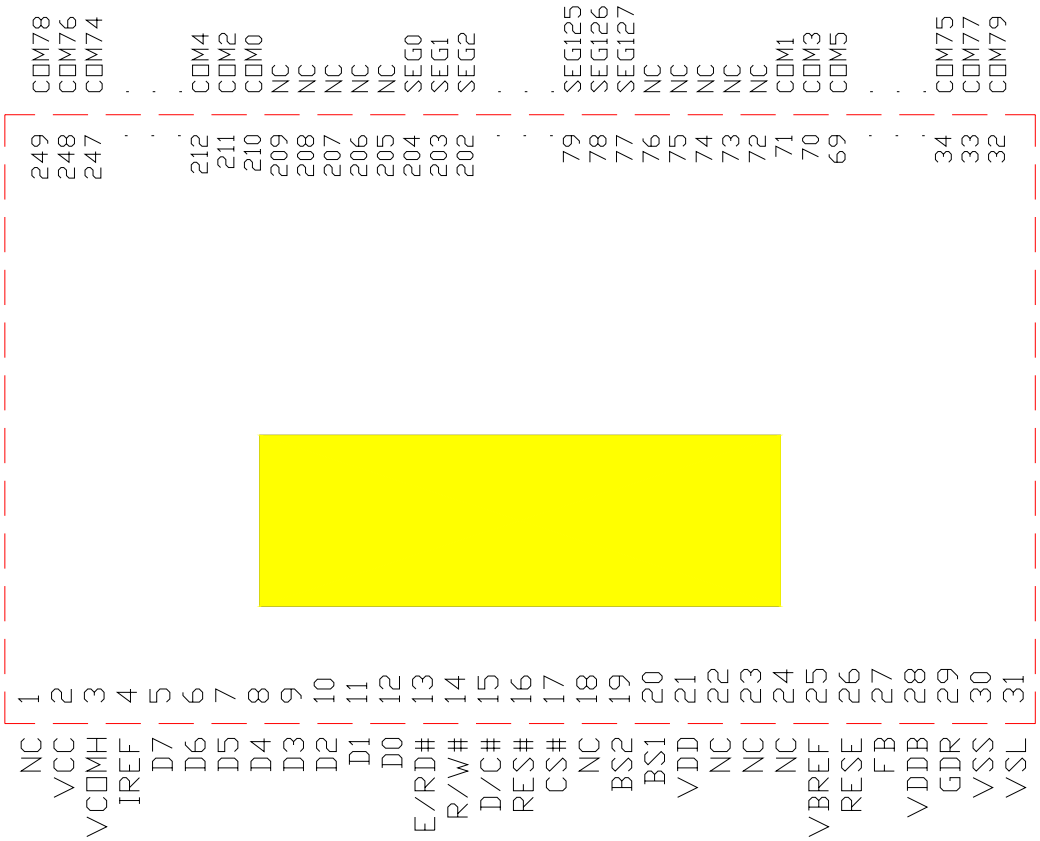


Table 3: SSD1325T6R1 TAB Pin assignment Table

PIN NO.	PIN NAME	PIN NO.	PIN NAME	PIN NO.	PIN NAME	PIN NO.	PIN NAME
1	NC	81	SEG123	161	SEG43	241	COM62
2	VCC	82	SEG122	162	SEG42	242	COM64
3	VCOMH	83	SEG121	163	SEG41	243	COM66
4	IREF	84	SEG120	164	SEG40	244	COM68
5	D7	85	SEG119	165	SEG39	245	COM70
6	D6	86	SEG118	166	SEG38	246	COM72
7	D5	87	SEG117	167	SEG37	247	COM74
8	D4	88	SEG116	168	SEG36	248	COM76
9	D3	89	SEG115	169	SEG35	249	COM78
10	D2	90	SEG114	170	SEG34		
11	D1	91	SEG113	171	SEG33		
12	D0	92	SEG112	172	SEG32		
13	E/RD#	93	SEG111	173	SEG31		
14	R/W#	94	SEG110	174	SEG30		
15	D/C#	95	SEG109	175	SEG29		
16	RES#	96	SEG108	176	SEG28		
17	CS#	97	SEG107	177	SEG27		
18	NC	98	SEG106	178	SEG26		
19	BS2	99	SEG105	179	SEG25		
20	BS1	100	SEG104	180	SEG24		
21	VDD	101	SEG103	181	SEG23		
22	NC	102	SEG102	182	SEG22		
23	NC	103	SEG101	183	SEG21		
24	NC	104	SEG100	184	SEG20		
25	VBREF	105	SEG99	185	SEG19		
26	RESE	106	SEG98	186	SEG18		
27	FR	107	SEG97	187	SEG17		
28	VDDB	108	SEG96	188	SEG16		
29	GDR	109	SEG95	189	SEG15		
30	VSS	110	SEG94	190	SEG14		
31	VSL	111	SEG93	191	SEG13		
32	COM79	112	SEG92	192	SEG12		
33	COM77	113	SEG91	193	SEG11		
34	COM75	114	SEG90	194	SEG10		
35	COM73	115	SEG89	195	SEG9		
36	COM71	116	SEG88	196	SEG8		
37	COM69	117	SEG87	197	SEG7		
38	COM67	118	SEG86	198	SEG6		
39	COM65	119	SEG85	199	SEG5		
40	COM63	120	SEG84	200	SEG4		
41	COM61	121	SEG83	201	SEG3		
42	COM59	122	SEG82	202	SEG2		
43	COM57	123	SEG81	203	SEG1		
44	COM55	124	SEG80	204	SEG0		
45	COM53	125	SEG79	205	NC		
46	COM51	126	SEG78	206	NC		
47	COM49	127	SEG77	207	NC		
48	COM47	128	SEG76	208	NC		
49	COM45	129	SEG75	209	NC		
50	COM43	130	SEG74	210	COM0		
51	COM41	131	SEG73	211	COM2		
52	COM39	132	SEG72	212	COM4		
53	COM37	133	SEG71	213	COM6		
54	COM35	134	SEG70	214	COM8		
55	COM33	135	SEG69	215	COM10		
56	COM31	136	SEG68	216	COM12		
57	COM29	137	SEG67	217	COM14		
58	COM27	138	SEG66	218	COM16		
59	COM25	139	SEG65	219	COM18		
60	COM23	140	SEG64	220	COM20		
61	COM21	141	SEG63	221	COM22		
62	COM19	142	SEG62	222	COM24		
63	COM17	143	SEG61	223	COM26		
64	COM15	144	SEG60	224	COM28		
65	COM13	145	SEG59	225	COM30		
66	COM11	146	SEG58	226	COM32		
67	COM9	147	SEG57	227	COM34		
68	COM7	148	SEG56	228	COM36		
69	COM5	149	SEG55	229	COM38		
70	COM3	150	SEG54	230	COM40		
71	COM1	151	SEG53	231	COM42		
72	NC	152	SEG52	232	COM44		
73	NC	153	SEG51	233	COM46		
74	NC	154	SEG50	234	COM48		
75	NC	155	SEG49	235	COM50		
76	NC	156	SEG48	236	COM52		
77	SEG127	157	SEG47	237	COM54		
78	SEG126	158	SEG46	238	COM56		
79	SEG125	159	SEG45	239	COM58		
80	SEG124	160	SEG44	240	COM60		