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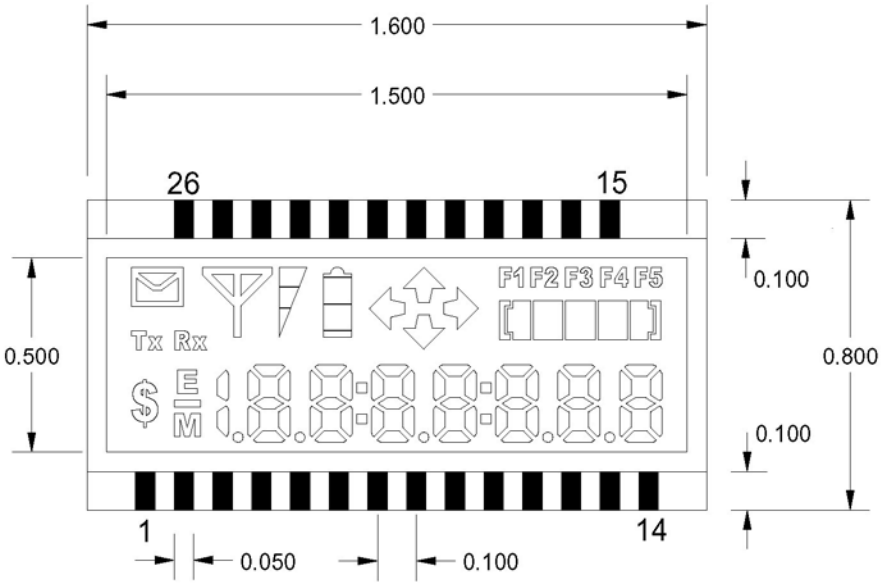
SBLCDA4



Overview

Our advanced SBLCDA4 is compatible with all MSP430s featuring LCD drive. The SBLCDA4 offers the following features:

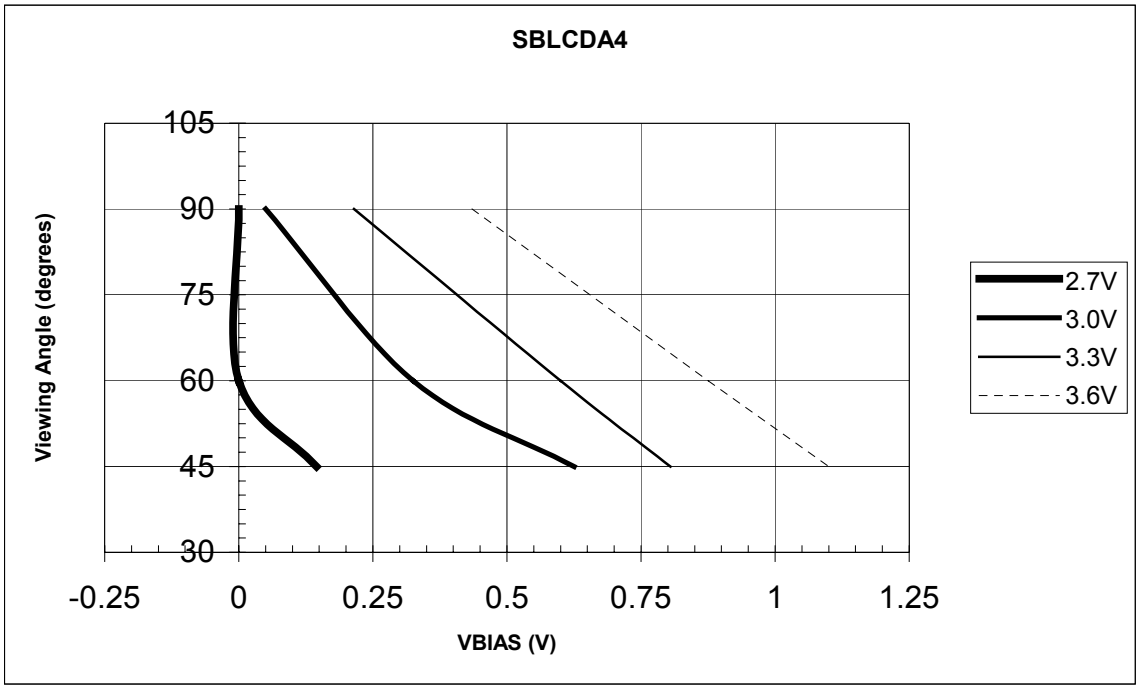
- 2.7v to 3.6v operation directly connected to the MSP430 LCD drive
- 4-mux operation
- 7.1 seven-segment with minus symbology allows versatile text
- Envelope, $, Error, and Memory symbols
- Arrows left, up, right, and down
- Battery with two-segment meter
- Antenna with three-segment meter, plus Tx/Rx symbols
- Colons for HH:MM:SS operation, plus five decimal options
- Progress bar for convenient user feedback
- Five function symbols
- 6 o'clock viewing angle
- Low-cost bias circuit allows adjustment for viewing angle, contrast, and temperature
- Operating temperature –20C/50C

Typical Operation

The following graphs illustrate the SBLCDA4 viewing angles for the range of V_{CC} from 2.7v to 3.6v. The test was performed on an MSP430F413. The voltage measured was on pin 40 (R03) of the MSP430F413. This is the input port of the lowest analog LCD level (V5). The voltage was controlled by a 200kΩ potentiometer.

Due to the wide viewing angle of the SBLCDA4 your bias voltage may vary from those shown in Figure 1.

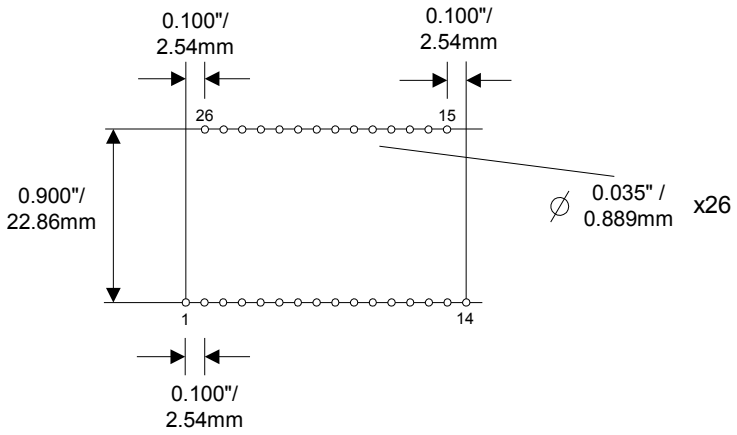
Figure 1—SBLCDA4 Viewing Angle

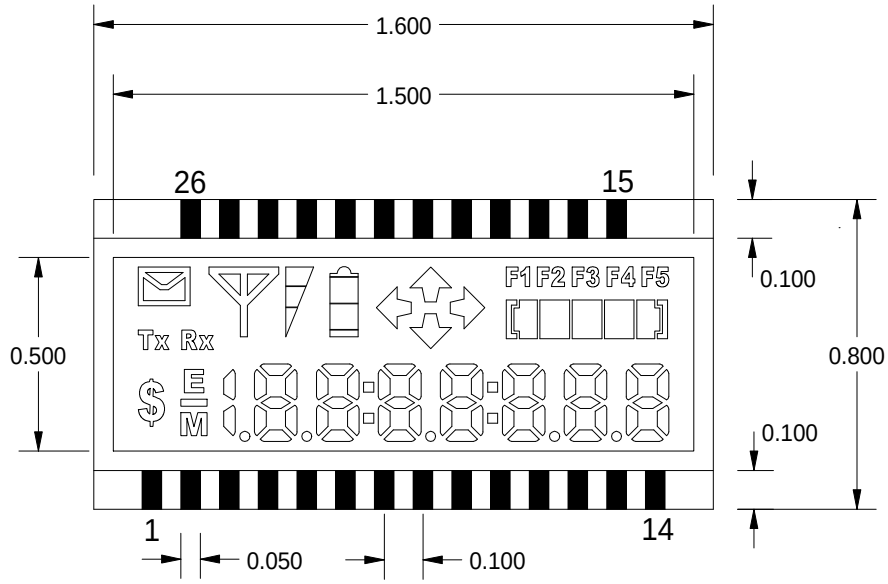


SBLCDA4 Segment Mapping

PIN	COM3	COM2	COM1	COM0		COM3	COM2	COM1	COM0	PIN
1	7F	7G	7E	DP7						
2	7A	7B	7C	7D		DOL	ERR	MINUS	MEM	**26**
3	6F	6G	6E	DP6		ENV	TX	RX	8BC	**25**
4	6A	6B	6C	6D		ANT	A2	A1	A0	**24**
5	5F	5G	5E	COL5		BT	B1	B0	BB	**23**
6	5A	5B	5C	5D		AU	AR	AD	AL	**22**
7	4F	4G	4E	DP4		PL	P0	P1	P2	**21**
8	4A	4B	4C	4D		F1	F2	F3	F4	**20**
9	3F	3G	3E	COL3		F5	PR	P4	P3	**19**
10	3A	3B	3C	3D					COM0	**18**
11	2F	2G	2E	DP2				COM1		**17**
12	2A	2B	2C	2D			COM2			**16**
13	1F	1G	1E	DP1		COM3				**15**
14	1A	1B	1C	1D						

Recommended SBLCDA4 Footprint





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Pins both sides, 0.100" pitch, approx. 20mil wide at PCB, approx 0.250" overall
Glass is 0.8" wide, pins are 0.9" apart at PCB (0.050" knee on each side)