

SED2020F_{OA/OB}

CMOS VFD DRIVER

■ DESCRIPTION

The SED2020F_{OA/OB} is a CMOS LSI dot-matrix vacuum fluorescent display anode and grid driver. It has 20 high-voltage anode outputs in 2×10 blocks.

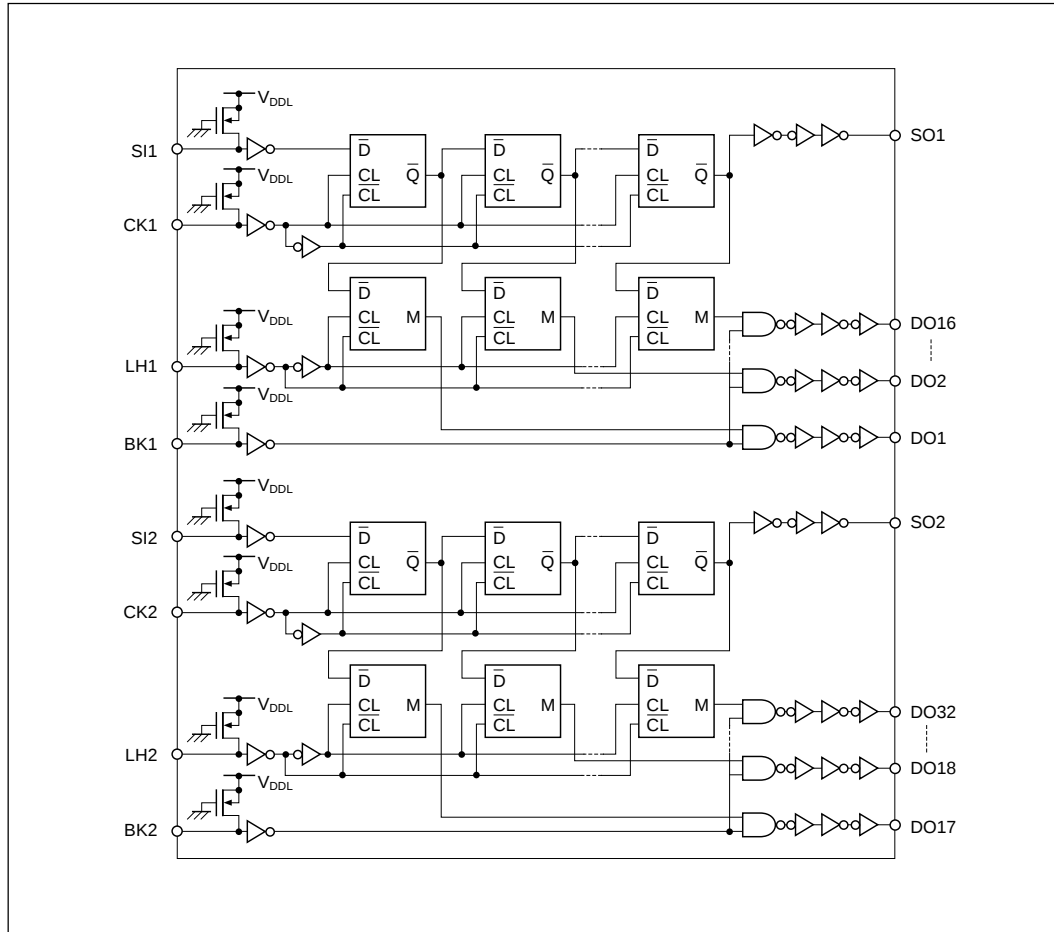
The SED2020F_{OA/OB} is TTL, LSTTL, CMOS and HSCMOS compatible, allowing direct interface to a wide range of standard devices. It has independent serial inputs and outputs for each 10-element block which feature data transfer rates of up to 4 Mbits/s. All inputs have internal pull-ups and serial outputs have a minimum fanout of one standard TTL load. The serial data transfer system simplifies controller requirements. The SED2020F_{OA/OB} can also be configured for 4-bit parallel data transfer.

SED2020F_{OA/OB} uses a 5V logic supply and a 30 to 70V display supply, and is available in 44- or 46-pin plastic flatpacks.

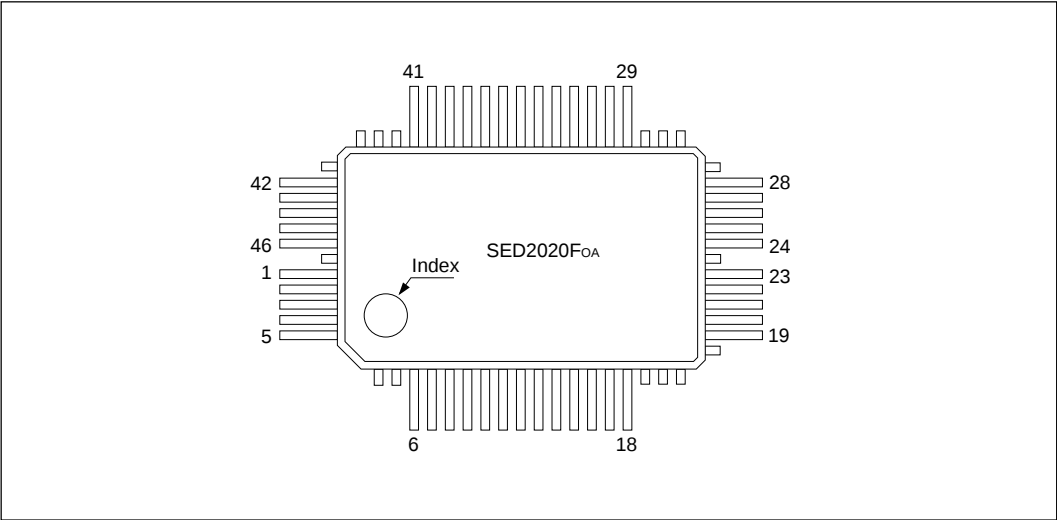
■ FEATURES

- 20 anode or grid output drivers
- 70V, 10mA grid drive capability
- Up to 4 Mbits/s serial data transfer rate
- Daisy-chain data transfer system for cascaded operation
- Can be configured for 4-bit parallel data transfer
- Silicon-gate CMOS technology
- 5V logic supply
- 30 to 70V display supply
- 44- or 46-pin plastic flatpack (QFP2-44pin [F_{OB}] and QFP1-46pin [F_{OA}])

■ BLOCK DIAGRAM



- PINOUT
- SED2020F_{OA}



Pin	
Number	Name
1	SI2
2	CK2
3	LH2
4	VDDL
5	VSS
6	VDDH
7	NC
8	DO11
9	DO12
10	DO13
11	DO14
12	DO15

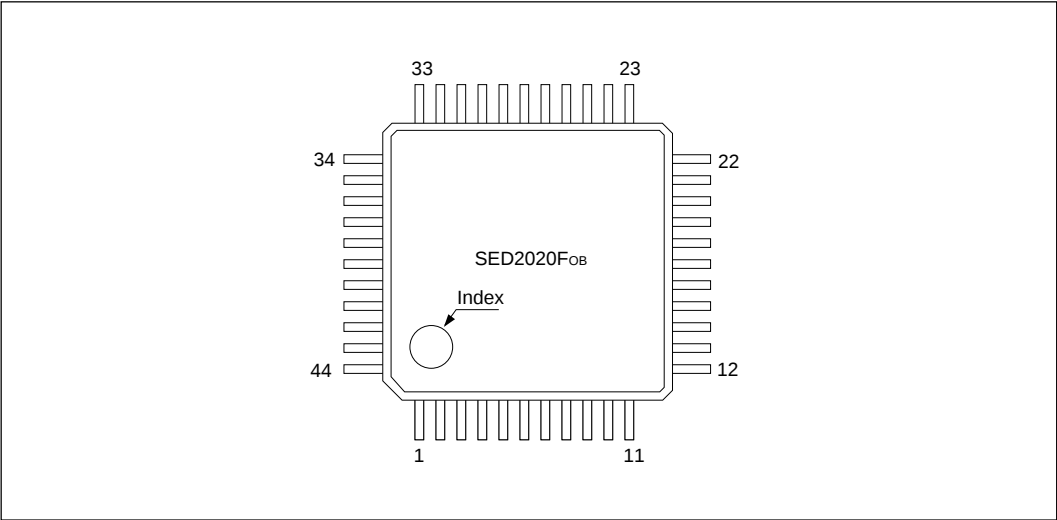
Pin	
Number	Name
13	DO16
14	DO17
15	DO18
16	DO19
17	DO20
18	NC
19	NC
20	NC
21	SO2
22	NC
23	NC
24	NC

Pin	
Number	Name
25	NC
26	SO1
27	NC
28	NC
29	NC
30	DO10
31	DO9
32	DO8
33	DO7
34	DO6
35	DO5
36	DO4

Pin	
Number	Name
37	DO3
38	DO2
39	DO1
40	NC
41	NC
42	BK2
43	BK1
44	LH1
45	CK1
46	SI1



● SED2020F_{OB}



Pin	
Number	Name
1	VDDH
2	DO11
3	DO12
4	DO13
5	DO14
6	DO15
7	DO16
8	DO17
9	DO18
10	DO19
11	DO20

Pin	
Number	Name
12	NC
13	NC
14	NC
15	SO2
16	NC
17	NC
18	NC
19	NC
20	SO1
21	NC
22	NC

Pin	
Number	Name
23	DO10
24	DO9
25	DO8
26	DO7
27	DO6
28	DO5
29	DO4
30	DO3
31	DO2
32	DO1
33	NC

Pin	
Number	Name
34	BK2
35	BK1
36	NC
37	LH1
38	CK1
39	SI1
40	SI2
41	CK2
42	LH2
43	VDDL
44	VSS

■ PIN DESCRIPTION

Number		Name	Description
SED2020F _{OA}	SED2020F _{OB}		
1	40	SI2	Serial data input 2
2	41	CK2	Serial data input clock 2
3	42	LH2	Active-HIGH data latch input 2
4	43	VDDL	5V logic supply input
5	44	VSS	Ground
6	1	VDDH	30 to 70V output driver supply input. Referenced to Vss
7	36	NC	No connection
8 to 17	2 to 11	DO11 to DO20	Parallel data outputs
18 to 20	12 to 14	NC	No connection
21	15	SO2	Serial data output 2
22 to 25	16 to 19	NC	No connection
26	20	SO1	Serial data output 2
27 to 29	21, 22	NC	No connection
30 to 39	23 to 32	DO10 to DO1	Parallel data outputs
40, 41	33	NC	No connection
42	34	BK2	Active-HIGH blanking input 2. Used to disable output circuitry while parallel data is being latched.
43	35	BK1	Active-HIGH blanking input 1. Used to disable output circuitry while parallel data is being latched.
44	37	LH1	Active-HIGH data latch input 1
45	38	CK1	Serial data input clock 1
46	39	SI1	Serial data input 1

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