



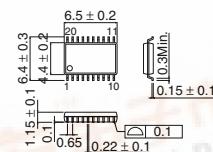
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## On Screen Display IC BU2993FV

### ● Description

The BU2993FV is a character generator IC designed for TV monitors and any other displays. It supports several features such as 512 characters display, 12-line × 28-character display, color and size of characters selectable, choice of background colors, 3-D displays, and 3-wire fixed 16 bit serial interface.

Dimension (Units:mm)



SSOP-B20

### ● Features

- 1) 12-line × 28-character display
- 2) 512 character types
- 3) 4bit character color code
- 4) Character size can be selected from 4 sizes.
- 5) 3-D display possible for each character
- 6) Negative/positive display switch
- 7) Characters are displayed in a 12 × 18 dot matrix.
- 8) 3-wire fixed, 16 bit serial interface
- 9) Compatible with custom font

### ● Applications

DVC, Camcoders, DSC, Video-CD, DVD, Car navigation

### ● Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Power supply voltage	V <sub>DD</sub>	-0.3~+7.0	V
Terminal voltage	V <sub>IN</sub>	-0.3~V <sub>DD</sub> +0.3	V
Storage temperature range	T <sub>stg</sub>	-50 ~+125	°C
Power dissipation	P <sub>D</sub>	400 *	mW

\*Derating: 4.0mW/°C for operation above Ta=25°C.

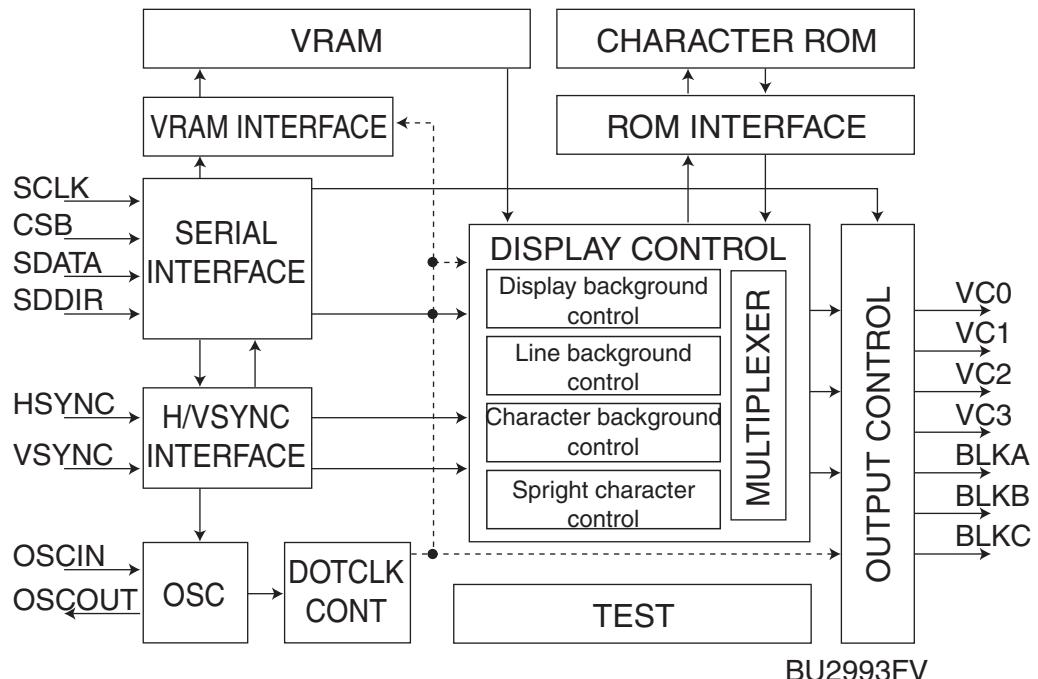
● Recommended Operating Conditions (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Power supply voltage	V <sub>DD</sub>	2.4	—	3.6	V
Operating frequency	F <sub>osc</sub>	6.0	—	17.8	MHz

● Electrical Characteristics

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Current consumption	I <sub>DD</sub>	—	3.9	6.0	mA	V <sub>CC</sub> =2.7V, f <sub>CLK</sub> =8MHz
		—	5.0	7.0	mA	V <sub>CC</sub> =3.3V, f <sub>CLK</sub> =8MHz
Low input voltage	V <sub>IL</sub>	0	—	0.2V <sub>DD</sub>	V	
High input voltage	V <sub>IH</sub>	0.8V <sub>DD</sub>	—	V <sub>DD</sub>	V	
Low input current	I <sub>IL</sub>	—	—	10	μA	
		25	50	100	μA	V <sub>IL</sub> =0V
High input current	I <sub>IH</sub>	—	—	10	μA	V <sub>IH</sub> =3.0V
Low output voltage	V <sub>OL</sub>	—	—	0.1V <sub>DD</sub>	V	I <sub>OL</sub> =4.0mA
		—	—	0.1V <sub>DD</sub>	V	I <sub>OL</sub> =0.5mA, OSCOUT
High output voltage	V <sub>OH</sub>	0.9V <sub>DD</sub>	—	—	V	I <sub>OL</sub> =4.0mA
		0.9V <sub>DD</sub>	—	—	V	I <sub>OL</sub> =0.5mA, OSCOUT

● Application circuit



## Appendix

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