

# 10bit 6-channel D/A converter

## BU2507FV

BU2507FV is an IC that incorporates 10bit 6-channel D/A converter using the R-2R system. Each channel output incorporates a Rail to Rail type output with buffer amplifier. This IC utilizes the TTL level input method. RESET pin can keep the output voltage in the lower reference voltage range.

### ●Applications

DVD, CD-R, CD-RW, DVC, Digital camera, and other industrial equipments.

### ●Features

- 1) High-performance 10bit 6-channel D/A converter adopting the R-2R system.
- 2) Power supply voltage : 4.5~5.5V.
- 3) Each channel output incorporates a Rail to Rail type output with buffer amplifier.
- 4) RESET pin can keep output voltage of all channels within the lower reference voltage range.
- 5) Digital input compatible with TTL levels.
- 6) 10MHz input frequency.
- 7) 14bit 3wire serial data + RESET signal input. (4bit address + 10bit data)

### ●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V <sub>CC</sub>	-0.3~+6.0	V
Upper reference voltage of D/A converter	V <sub>DD</sub>	-0.3~+6.0	V
Input voltage	V <sub>IN</sub>	-0.3~+6.0	V
Output voltage	V <sub>OUT</sub>	-0.3~+6.0	V
Power dissipation	P <sub>d</sub>	350*	mW
Operating temperature	T <sub>opr</sub>	-25~+85	°C
Storage temperature	T <sub>stg</sub>	-55~+125	°C

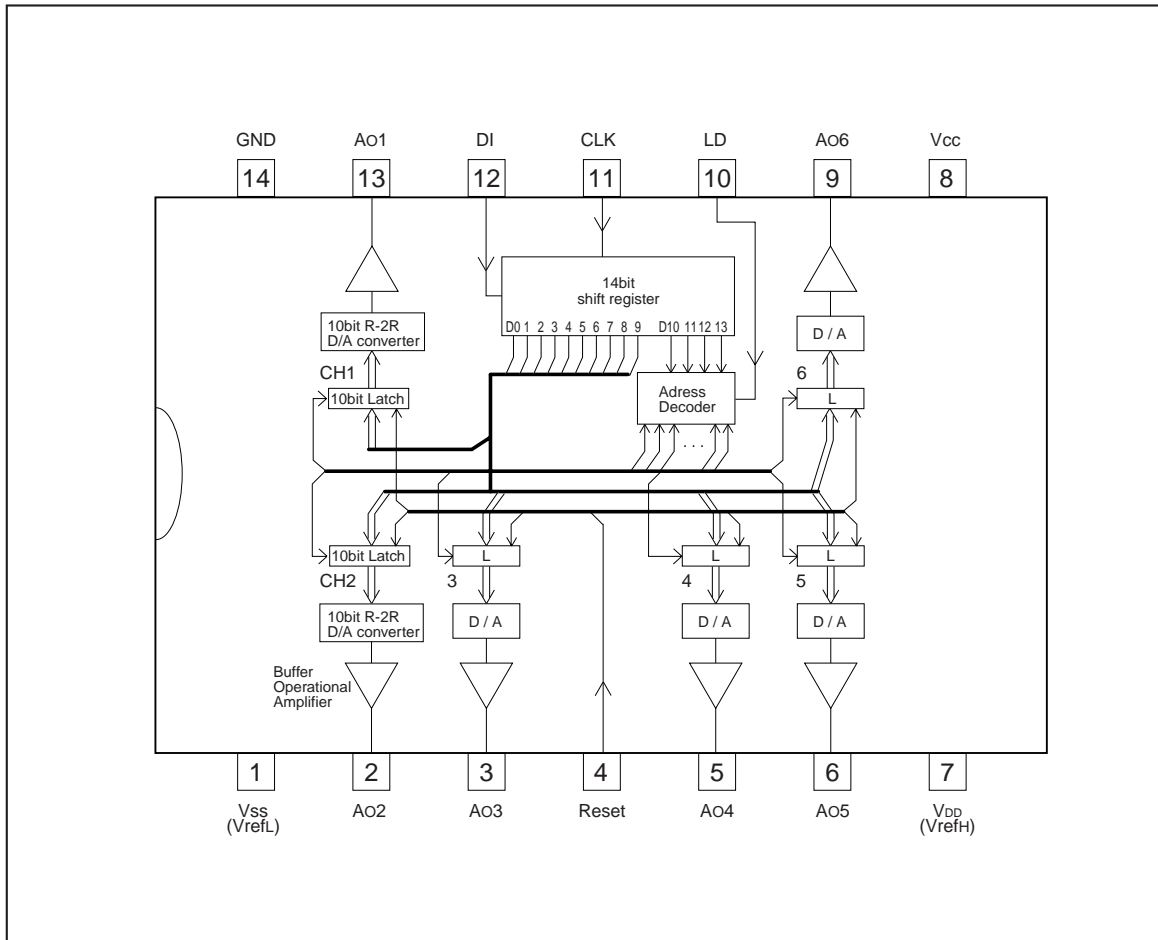
\* Operating at higher than Ta=25°C, 3.5mW shall be reduced per 1°C.

### ●Recommended operating conditions (Ta=25°C)

Parameter	Symbol	Limits	Unit
Power supply voltage	V <sub>CC</sub>	4.5~5.5	V

Optical disc ICs

●Block diagram

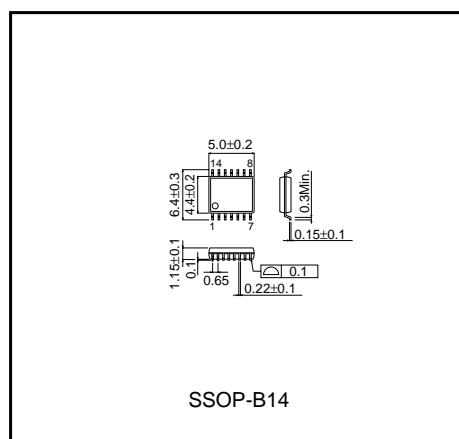


## Optical disc ICs

## ●Pin descriptions

Pin No.	Pin name	Analog / Digital	I / O	Function	Equivalent Circuit
1	Vss	Analog	–	D/A converter lower reference voltage (VrefL) input terminal	6
2	Ao2	Analog	O	10bit D/A converter output terminal (CH2)	4
3	Ao3	Analog	O	10bit D/A converter output terminal (CH3)	4
4	Reset	Digital	I	The analog output of all channels is fixed for "L"	2
5	Ao4	Digital	O	10bit D/A converter output terminal (CH4)	4
6	Ao5	Analog	O	10bit D/A converter output terminal (CH5)	4
7	VDD	Analog	–	D/A converter upper reference voltage (VrefH) input terminal	5
8	Vcc	–	–	Power supply terminal	–
9	Ao6	Analog	O	10bit D/A converter output terminal (CH6)	4
10	LD	Digital	I	When H-level signal is input to this terminal, the value stored in 14-bit shift register is loaded in decoder and D/A converter output register	1
11	CLK	Digital	I	Shift clock input terminal. Input signal at DI pin is input to 14-bit shift register at rise of shift clock pulse	1
12	DI	Digital	I	Serial data input terminal to input 14-bit (address 4 bit + data 10bit) long serial data	1
13	Ao1	Analog	O	10bit D/A converter output terminal (CH1)	4
14	GND	–	–	GND terminal	–

## ●External dimensions (Unit : mm)



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