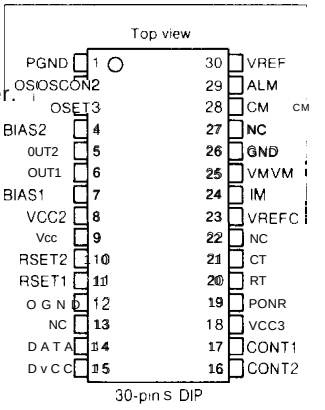
IR3C09

Description

The IR3C09 is a laser diode driver IC for laser beam printers (LBP). The laser photo output, set to a constant value, can be turned ON and OFF at high speeds by this IC. The circuit that sets the beam output to a constant value consists of two independent feedback circuits each using an 8-bit DA converter. The overall variation in set drive current can be minimized to the order of 0.1%. The Sharp laser diodes that can be supported by this IC are of Sharp P type in which the cathode of the laser diode is directly connected to the anode of the PIN photodiode for monitor. The laser case is to be connected to GND.



Features

- +5V single power supply
- Drive current quantizing variation 0.1%
- High speed switching 20 MHz (40 Mb/s)
- Drive current setting range O to 150mA
- Offset output current <50mA (Additive)
- Built-in reference voltage
- Alarm function
- Setting finish signal (comparator output monitor)
- TTL level
- 30-pin shrink dual-in-line plastic mold package
- Bipolar silicon monolithic IC
- No anti-radiation design

Pin Assignment

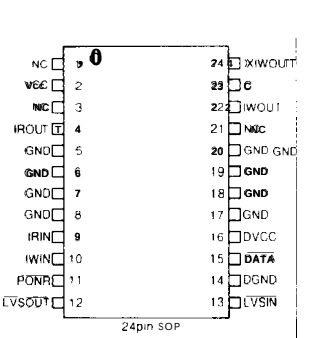
Terminal No.	Symbol	Function
1	PGND	GND terminal for only output
2	OSCON	Translator baae for offset output current
3	OSET	Transistor emitter for offset output current
4	BIAS2	Output step bias terminal 2
5	0UT2	Drive current output terminal 2 (sink)
6	OUT1	Drive current output terminal 1 (source)
7	BIAS1	Output step bias terminal 1
8	VCC2	Power supply terminal (+5V)
9	Vcc	Power supply terminal (+5V)
to	RSET2	IF2 (drive current for fine tuning) fullscale setting resistor terminal
11	RSET1	IF 1 (drive current for rough tuning) fullscale setting resistor terminal
12	DGND	GND terminal for only data input
13	NC	NC terminal
14	DATA	Switching signal input terminal
15	DVCC	Power supply terminal for only data input (+5V)

Terminal No.	Symbol	Function
16	CONT2	Control terminal 2
17	CONT1	Control terminal 1
18	VCC3	Power supply terminal (+ 5V)
19	PONR	Power on reset terminal, Active "L"
20	RT	Oscillation frequency setting resistor terminal
21	CT	Oscillation frepuency setting resistor capacitance terminal
22	NC	NC terminal
23	VREFC	Reference voltage setting resistor terminal
24	IM	Photo output monitor voltage input terminal
25	VM	Photo output setting reference voltage terminal
26	GND	GND terminal
27	NC	NC terminal
28	CM	Setting finish detect terminal (TTL level)
29	ALM	Laser deterioration alarm output terminal, open collector output
30	VREF	Offset output current setting reference voltage terminal

IR3C1O

Description

The IR3C1O is a laser diode driver IC which is used for magneto-optical disks, laser visions, laser beam printers, and etc. The IC consists of a constant current source that provides DC drive and a constant current source that provides pulse drive. In case of using for magneto-optical disks, these can provide laser driving current in the read mode and that in the write/erase mode,
The Sharp laser diodes that can be supported by this IC are of Sharp P type in which the cathode of the laser diode is directly connected to the anode of the PIN photodiode for monitor. The laser case is to be connected to GND. In conjunction with the laser control IC, IR3C11, this IC can easily perform the APC (Automatic Power Control).



Features

- +5V single power supply
- High speed switching 10 MHz
- Drive current setting range O to 200mA
- Output inhidit capability
- 24-pin small-out-line plastic mold package
- Bipolar silicon monolithic IC
- Not designed or rated as radiation hardened

Pin Assignment

Terminal No.	Symbol	Function
1	NC	
2	Vcc	Power supply terminal (+5V)
3	NC	
4	IROUT	READ driver current output terminal (source)
5 to 8	GND	GND terminal
9	IRIN	READ control current input terminal
10	IWIN	WRITE control current input terminal
11	PONR	Power on reset terminal
12	LVSOUT	Output inhibit signal monitor terminal Active "L"

Terminal No.	Symbol	Function
13	LVSIN	Output inhibit terminal
14	DGND	GND terminal for only data input
15	DATA	Switching signal input terminal
16	DVcc	Power supply terminal for only data input (+ 5V)
17 to 20	GND	GND terminal
21	NC	
22	IWOUT	WRITE driver current output terminal (source)
23	C	Driver current overshoot suppress terminal
24	XIWOUT	WRITE driver current invert output terminal (Source)