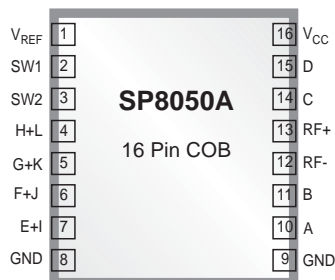


8 Channel, 150MHz Fully Integrated PDIC Receiver with Gain Switching

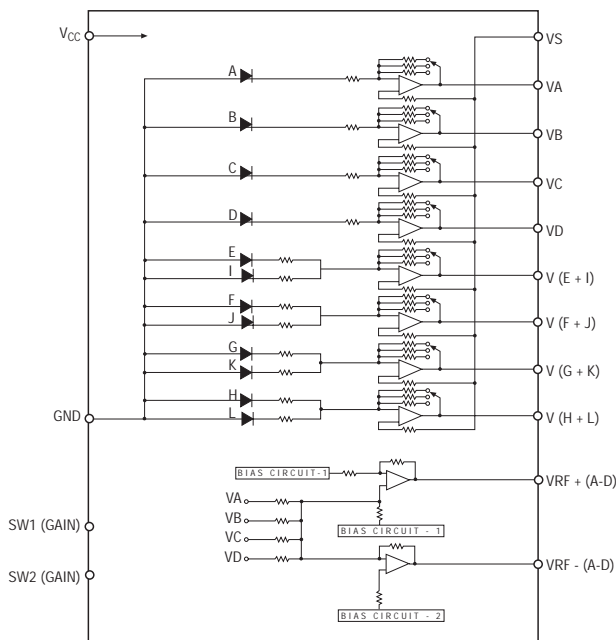
- Data channel bandwidth 150MHz
- Settling Time: 8ns to 1% for 1.5V step
- Three selectable Gain Settings
- Group Delay Error less than 2ns up to 70MHz
- Low Offset Drift of less than $20\mu\text{V}/^\circ\text{C}$
- Low Offset Voltage of less than 10mV



DESCRIPTION

The SP8050A is a high performance 8 channel PDIC with a fully integrated photo detector array ideally suited for high speed DVDRW, DVDROM and CDRW systems. Responsivity is fully specified at wavelengths of 650nm and 780nm. The 8 channels consist of 4 high speed channels (A, B, C, D) for data detection as well as 4 tracking channels (E, F, G, H) for beam positioning requirements. Two additional outputs (RF+ and RF-) representing the sums of the high speed channels are also provided.

The SP8050A is manufactured with an advanced, fully complementary proprietary BiCMOS process that enables integration of on-board multiple photo detector arrays



SP8050A Functional Diagram

PIN NUMBER	NAME	DESCRIPTION
1	V_{REF}	Reference Voltage
2	SW1	Gain Select 1
3	SW2	Gain Select 2
4	H+L	Tracking Channel Sum
5	G+K	Tracking Channel Sum
6	F+J	Tracking Channel Sum
7	E+I	Tracking Channel Sum
8, 9	GND	Power Ground
10	A	Data Channel
11	B	Data Channel
12	RF-	RF Sum Minus (A to D)
13	RF+	RF Sum Plus (A to D)
14	C	Data Channel
15	D	Data Channel
16	V_{CC}	Supply Voltage



PART NUMBER

SP8050A

TEMPERATURE RANGE

-30°C to +80°C

PACKAGE

16 lead COB



SIGNAL PROCESSING EXCELLENCE

Sipex Corporation**Headquarters and
Sales Office**

22 Linnell Circle
Billerica, MA 01821
TEL: (978) 667-8700
FAX: (978) 670-9001
e-mail: sales@sipex.com

Sales Office

233 South Hillview Drive
Milpitas, CA 95035
TEL: (408) 934-7500
FAX: (408) 935-7600

Sipex Corporation reserves the right to make changes to any products described herein. Sipex does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights nor the rights of others.