CCD201 – 10,000 Element Self Scanning Image Sensor

GENERAL DESCRIPTION*
The CCD201 is a 2-phase 10,000-element self-scanning image sensor. It uses charge coupled technology with buried channels and ion-implanted barriers. The light sensitive area is a 100×100 array of photo elements which provide an image aspect ratio of 4×3. The image sensing elements are 1.2mils $\times$ 0.8mils located on 1.2mil vertical centres and 1.6mil horizontal centres.

In addition to the image array, the CCD201 chip includes: 100 columns of 2-phase analog shift registers interdigitated in the photosensor array, a 102-element 2-phase analog output shift register, an output detector/preamplifier and a compensation output amplifier.

The device is packaged in a 24-lead dual in-line package with an optical glass window.

*Full data available on request.

FEATURES
2-phase clock operation.
100×100-element array on a single chip.
Interlaced self scanning.
All operating voltages under 20V
On-chip video preamplifier compensation circuit
Low power 50mW TYP.
Packaged in 24-lead DIP with optical glass window.

SPECIAL INFORMATION
Static discharge to any lead may cause permanent damage. Use shorting clip provided during insertion and removal. Store in shorting clip or conductive foam.
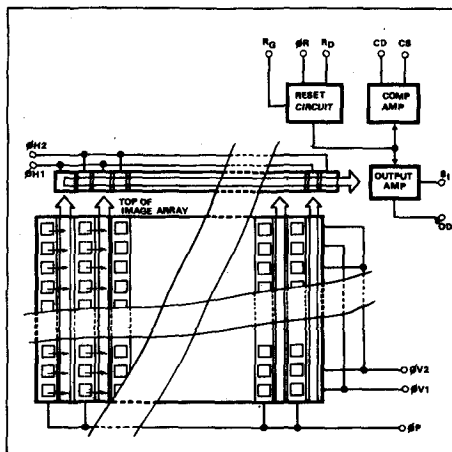
ABSOLUTE MAXIMUM RATINGS

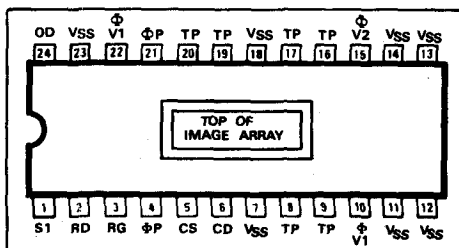|	
Storage temperature	$-25°C$ to $-100°C$
Operating temperature	$-25°C$ to $+65°C$
Voltages	
Leads 7, 8, 13, 14, 18, 23	$V_{SS} = 0V$
Leads 1, 2, 5, 6, 24	$+15V$ to $-6V$
Leads 3, 4, 10, 11, 15, 21, 22	$+15V$ to $-10V$

REFERENCE TABLE

Code	Stock No.
CCD201ADC	36043F

BLOCK DIAGRAM

CONNECTION DIAGRAM

See outline drawing No. 146 for physical dimensions.

LEAD NAMES

Symbol	Function
S₁	Output amplifier source
RD	Reset drain
RG	Reset gate
øR	Reset clock
CS	Compensation amplifier source
CD	Compensation amplifier drain
øH1, øH2	Horizontal register clocks
øV1, øV2	Vertical clocks
øp	Photogate clock
OD	Output amplifier drain
TP	Production test points