



36-MHz SAMPLE TWO CHANNEL CCD SIGNAL PROCESSOR

FEATURES

- **TWO CHANNEL CCD SIGNAL PROCESSING:**
 - Correlated Double Sampling
- 75-dB SNR
- **14-BIT A/D CONVERSION:**
 - No Missing Codes
- **PORTABLE OPERATION:**
 - Low Voltage: 2.7 V to 3.6 V
 - Low Power: 210 mW (typ) at 2.7 V
 - Power-Down Mode: 14 mW

APPLICATIONS

- Digital Video Camera (DVC)
- Digital Still Camera (DSC)
- Front End for Dual Channel CCD

DESCRIPTION

The VSP2254 is a high-speed and high-resolution mixed-signal processing IC for CCD signal processing, which integrates two channels of correlated double sampling (CDS) and a 14-bit analog-to-digital converter. The VSP2254 also provides black level clamping for an accurate black level reference, input signal clamping, and offset correction of the CDS. The VSP2254 operates from 2.7 V to 3.6 V of single supply.



Please be aware that an important notice concerning availability, standard warranty, and use in critical applications of Texas Instruments semiconductor products and disclaimers thereto appears at the end of this data sheet.

PACKAGING INFORMATION

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead/Ball Finish (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
VSP2254GSJ	LIFEBUY	BGA MICROSTAR JUNIOR	ZSJ	96	168	TBD	Call TI	Call TI	0 to 85	VSP2254	
VSP2254ZSJG1	LIFEBUY	BGA MICROSTAR JUNIOR	ZSJ	96	168	TBD	Call TI	Call TI	0 to 85	VSP2254	

(1) The marketing status values are defined as follows:

ACTIVE: Product device recommended for new designs.

LIFEBUY: TI has announced that the device will be discontinued, and a lifetime-buy period is in effect.

NRND: Not recommended for new designs. Device is in production to support existing customers, but TI does not recommend using this part in a new design.

PREVIEW: Device has been announced but is not in production. Samples may or may not be available.

OBSELETE: TI has discontinued the production of the device.

(2) Eco Plan - The planned eco-friendly classification: Pb-Free (RoHS), Pb-Free (RoHS Exempt), or Green (RoHS & no Sb/Br) - please check <http://www.ti.com/productcontent> for the latest availability information and additional product content details.

TBD: The Pb-Free/Green conversion plan has not been defined.

Pb-Free (RoHS): TI's terms "Lead-Free" or "Pb-Free" mean semiconductor products that are compatible with the current RoHS requirements for all 6 substances, including the requirement that lead not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, TI Pb-Free products are suitable for use in specified lead-free processes.

Pb-Free (RoHS Exempt): This component has a RoHS exemption for either 1) lead-based flip-chip solder bumps used between the die and package, or 2) lead-based die adhesive used between the die and leadframe. The component is otherwise considered Pb-Free (RoHS compatible) as defined above.

Green (RoHS & no Sb/Br): TI defines "Green" to mean Pb-Free (RoHS compatible), and free of Bromine (Br) and Antimony (Sb) based flame retardants (Br or Sb do not exceed 0.1% by weight in homogeneous material)

(3) MSL, Peak Temp. - The Moisture Sensitivity Level rating according to the JEDEC industry standard classifications, and peak solder temperature.

(4) There may be additional marking, which relates to the logo, the lot trace code information, or the environmental category on the device.

(5) Multiple Device Markings will be inside parentheses. Only one Device Marking contained in parentheses and separated by a "~" will appear on a device. If a line is indented then it is a continuation of the previous line and the two combined represent the entire Device Marking for that device.

(6) Lead/Ball Finish - Orderable Devices may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead/Ball Finish values may wrap to two lines if the finish value exceeds the maximum column width.

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