

CCD VERTICAL DRIVER FOR DIGITAL CAMERAS

Check for Samples: [VSP1900](#)

FEATURES

- **CCD Vertical Driver:**
 - Three Field CCD Support
 - Two Field CCD Support
- **Output Drivers:**
 - 3 Levels Driver (V-Transfer) x 5
 - 2 Levels Driver (V-Transfer) x 3
 - 2 Levels Driver (E-Shutter) x 1
- **Driver Capability:**
 - 450 pF to 1890 pF With 60 Ω to 240 Ω
- **Input Phase:**
 - 3 State (V-Transfer) x 5
 - 2 State (V-Transfer) x 3
 - 2 State (E-Shutter) x 1
- **Portable Operation**
 - Input Interface: 2.7 V to 5.5 V

- **Power Supply:**
 - VDD 2.7 V to 5.5 V
 - VL –5 V to –9 V
 - VM GND
 - VH 11.5V to 15.5 V

APPLICATIONS

- Digital Camera
- Video Camera

DESCRIPTION

The VSP1900 is a CCD vertical clock driver with electric-shutter support. This device is composed of eight vertical transfer channels, which support both 3-field CCD and 2-field CCD operation. The VSP1900 contributes low power consumption and device count reduction in the system.



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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
VSP1900DBT	NRND	TSSOP	DBT	30	60	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR	0 to 85	VSP1900	
VSP1900DBTG4	NRND	TSSOP	DBT	30	60	Green (RoHS & no Sb/Br)	CU NIPDAU	Level-2-260C-1 YEAR	0 to 85	VSP1900	

(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.

OBSOLETE: 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.

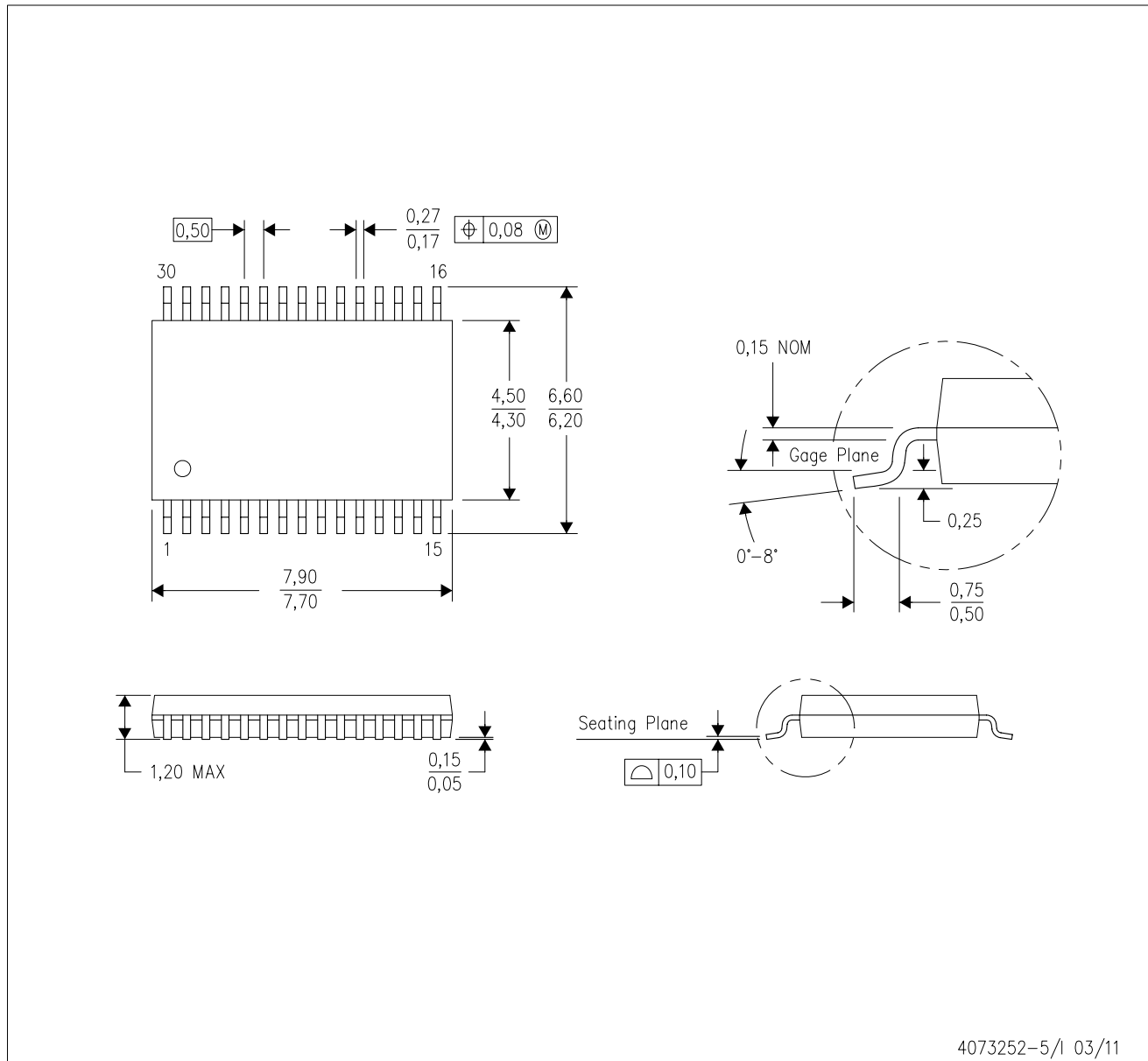
(6) Lead/Ball Finish - Orderable Devices may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead/Ball Finish values may wrap to two lines if the finish value exceeds the maximum column width.

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DBT (R-PDSO-G30)

PLASTIC SMALL OUTLINE



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- NOTES:
- A. All linear dimensions are in millimeters. Dimensioning and tolerancing per ASME Y14.5M-1994.
 - B. This drawing is subject to change without notice.
 - C. Body dimensions do not include mold flash or protrusion.
 - D. Falls within JEDEC MO-153.

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