Burr-Brown Products
from Texas Instruments

VSP2262



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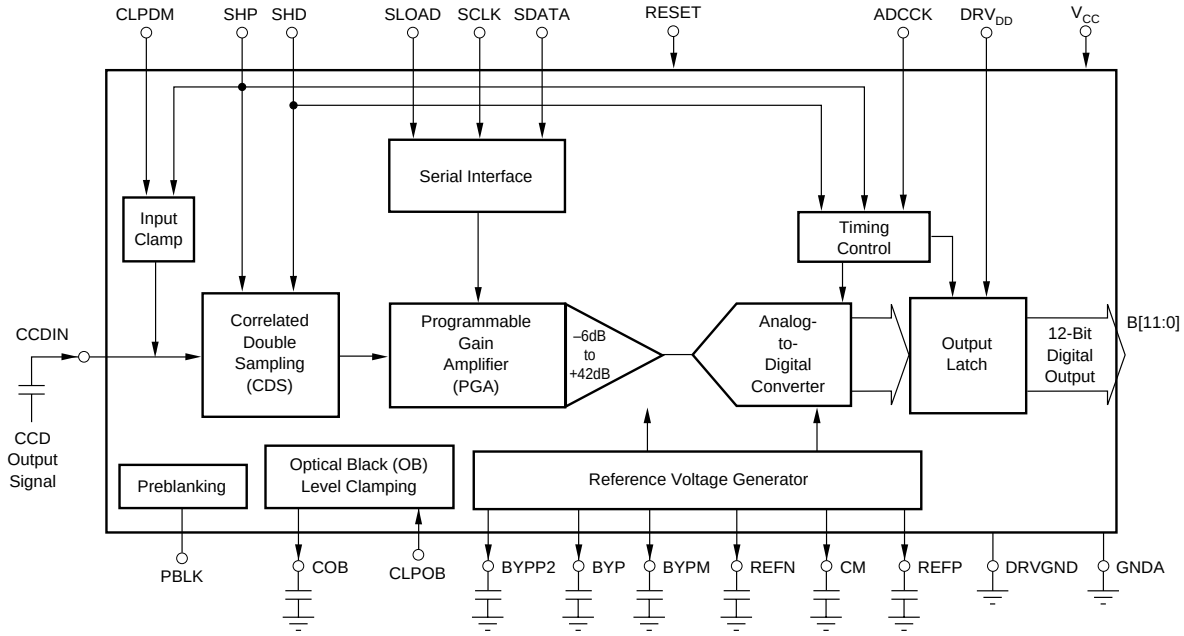
CCD SIGNAL PROCESSOR for DIGITAL CAMERAS

FEATURES

- **CCD SIGNAL PROCESSING:**
  Correlated Double Sampling (CDS)
  Programmable Black Level Clamping
- **PROGRAMMABLE GAIN AMPLIFIER (PGA):**
  –6dB to +42dB Gain Ranging
- **12-BIT DIGITAL DATA OUTPUT:**
  Up to 20MHz Conversion Rate
  No Missing Codes
- **79dB SIGNAL-TO-NOISE RATIO**
- **PORTABLE OPERATION:**
  Low Voltage: 2.7V to 3.6V
  Low Power: 83mW (typ) at 3.0V
  Stand-By Mode: 6mW

DESCRIPTION

The VSP2262 is a complete mixed-signal processing IC for digital cameras, providing signal conditioning and Analog-to-Digital (A/D) conversion for the output of a CCD array. The primary CCD channel provides Correlated Double Sampling (CDS) to extract video information from the pixels, –6dB to +42dB gain range with digital control for varying illumination conditions, and black level clamping for an accurate black level reference. Input signal clamping and offset correction of the input CDS are also performed. The stable gain control is linear in dB. Additionally, the black level is quickly recovered after gain change. The VSP2262Y is available in an LQFP-48 package and operates from a single +3V/+3.3V supply.



TEXAS INSTRUMENTS

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Printed in U.S.A. November, 2000

PACKAGING INFORMATION

Orderable Device	Status (1)	Package Type	Package Drawing	Pins	Package Qty	Eco Plan (2)	Lead finish/ Ball material (6)	MSL Peak Temp (3)	Op Temp (°C)	Device Marking (4/5)	Samples
VSP2262Y	ACTIVE	LQFP	PT	48	250	RoHS & Green	NIPDAU	Level-1-260C-UNLIM		VSP2262Y	Samples
VSP2262Y/2K	ACTIVE	LQFP	PT	48	2000	RoHS & Green	NIPDAU	Level-1-260C-UNLIM		VSP2262Y	Samples

(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) **RoHS:** TI defines "RoHS" to mean semiconductor products that are compliant with the current EU RoHS requirements for all 10 RoHS substances, including the requirement that RoHS substance do not exceed 0.1% by weight in homogeneous materials. Where designed to be soldered at high temperatures, "RoHS" products are suitable for use in specified lead-free processes. TI may reference these types of products as "Pb-Free".
RoHS Exempt: TI defines "RoHS Exempt" to mean products that contain lead but are compliant with EU RoHS pursuant to a specific EU RoHS exemption.
Green: TI defines "Green" to mean the content of Chlorine (Cl) and Bromine (Br) based flame retardants meet JS709B low halogen requirements of <=1000ppm threshold. Antimony trioxide based flame retardants must also meet the <=1000ppm threshold requirement.

(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.

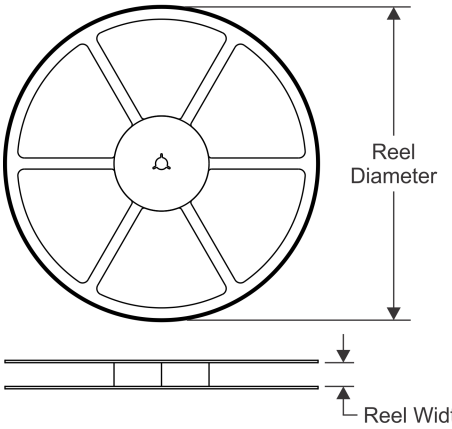
(6) Lead finish/Ball material - Orderable Devices may have multiple material finish options. Finish options are separated by a vertical ruled line. Lead finish/Ball material values may wrap to two lines if the finish value exceeds the maximum column width.

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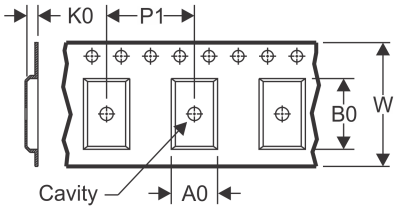
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TAPE AND REEL INFORMATION

REEL DIMENSIONS

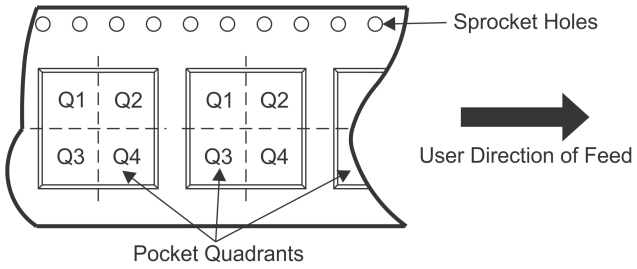


TAPE DIMENSIONS



A0	Dimension designed to accommodate the component width
B0	Dimension designed to accommodate the component length
K0	Dimension designed to accommodate the component thickness
W	Overall width of the carrier tape
P1	Pitch between successive cavity centers

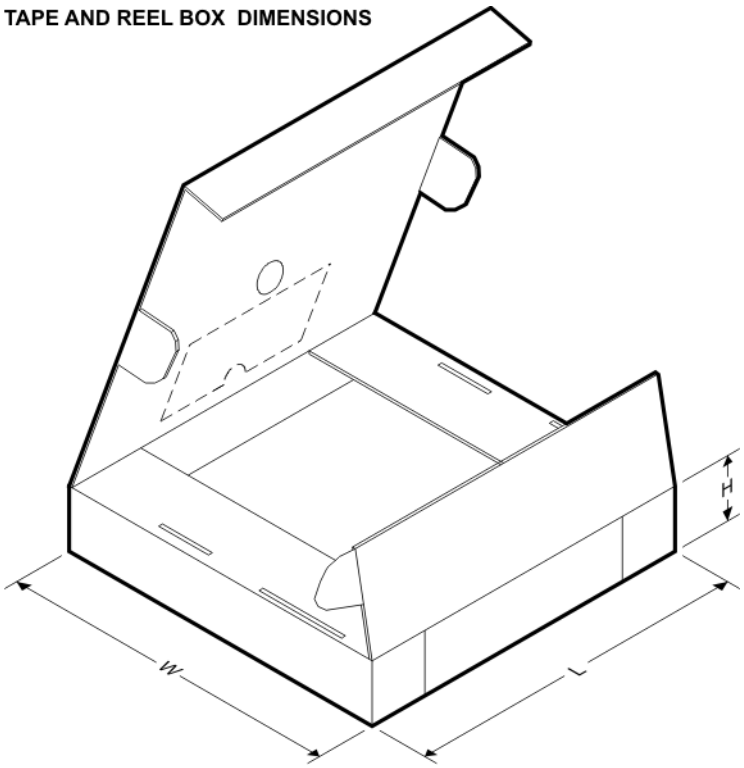
QUADRANT ASSIGNMENTS FOR PIN 1 ORIENTATION IN TAPE



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Reel Diameter (mm)	Reel Width W1 (mm)	A0 (mm)	B0 (mm)	K0 (mm)	P1 (mm)	W (mm)	Pin1 Quadrant
VSP2262Y/2K	LQFP	PT	48	2000	330.0	17.4	9.5	9.5	2.0	12.0	16.0	Q1

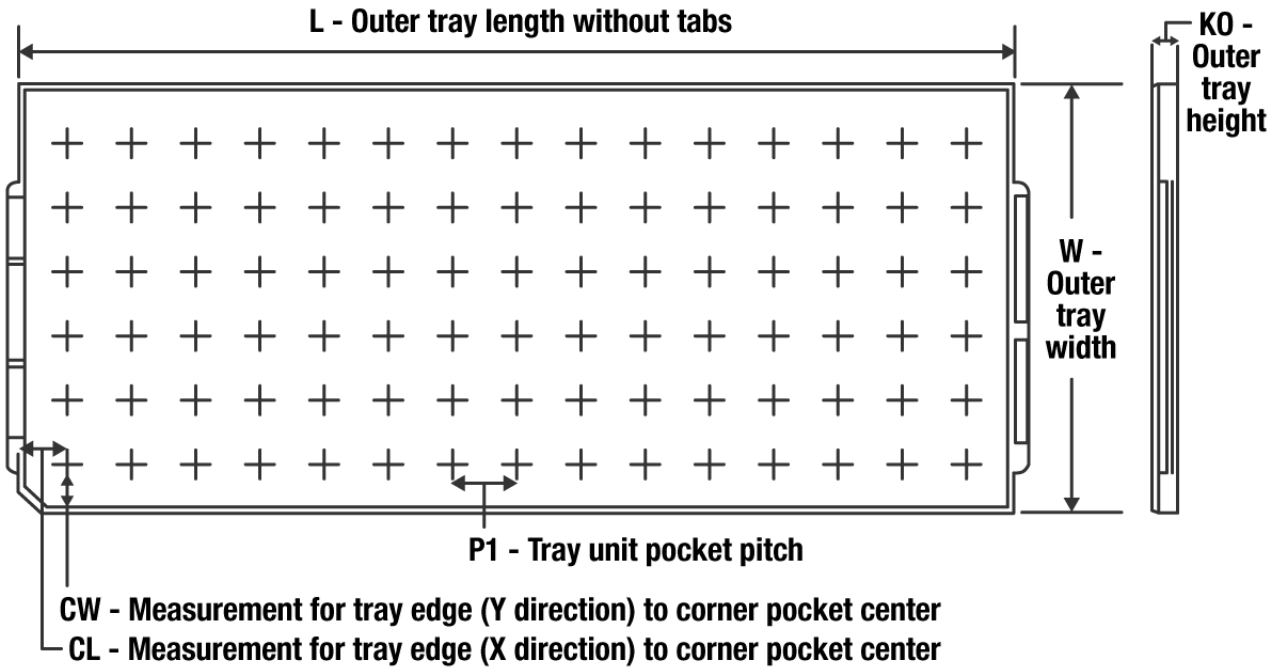
TAPE AND REEL BOX DIMENSIONS



*All dimensions are nominal

Device	Package Type	Package Drawing	Pins	SPQ	Length (mm)	Width (mm)	Height (mm)
VSP2262Y/2K	LQFP	PT	48	2000	367.0	367.0	38.0

TRAY



Chamfer on Tray corner indicates Pin 1 orientation of packed units.

*All dimensions are nominal

Device	Package Name	Package Type	Pins	SPQ	Unit array matrix	Max temperature (°C)	L (mm)	W (mm)	K0 (µm)	P1 (mm)	CL (mm)	CW (mm)
VSP2262Y	PT	LQFP	48	250	10x25	150	315	135.9	7.62	12.2	11.1	11.25

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