

## Product Overview

### AR0522: CMOS Image Sensor, 5.1 MP, 1/2.5", Near Infra-Red Enhancement

For complete documentation, see the data sheet.

The AR0522 is a 1/2.5-inch CMOS digital image sensor with an active-pixel array of 2592 (H) x 1944 (V). It captures images in either linear or high dynamic range modes with a rolling-shutter readout, and includes sophisticated camera functions such as binning, windowing and both video and single frame modes. It is designed for both low light and high dynamic range performance, with line interleaved T1/T2 read out to support off chip HDR in an ISP chip. The AR0522 produces extraordinarily clear, sharp digital pictures, and its ability to capture both continuous video and single frames makes it the perfect choice for wide range of applications.

### Features

- 5 Mp at 60 fps for Excellent Video Performance
- Small Optical Format (1/2.5-inch)
- Color Filter Array : RGB and Monochrome
- 1440p Mode for 16:9 Video
- Superior Low-light Performance
- 2.2 m Back Side Illuminated Pixel Technology
- Supports Line Interleaved T1/T2 Readout to Enable HDR Processing in ISP Chip
- Support for External Mechanical Shutter
- On-chip Phase-locked Loop (PLL) Oscillator
- Integrated Color and Lens Shading Correction

For more features, see the data sheet

### Applications

- Video Surveillance
- High Dynamic Range Imaging
- Machine Vision

### End Products

- Security camera
- Action camera
- Hunting camera
- Body camera
- Car DVR

### Part Electrical Specifications

| Product               | Pricing (\$/Unit) | Compliance                                      | Status | Type | Megapixels | Frame Rate (fps) | Optical Format | Shutter Type | Pixel Size (µm) | Output Interface | Color | Package Type |
|-----------------------|-------------------|---|--------|------|------------|------------------|----------------|--------------|-----------------|------------------|-------|--------------|
| AR0522SRSC09SURA0-DP  |                   | Pb-free<br>Halide free<br>non AEC-Q<br>and PPAP | Active | CMOS | 5.1        | 60               | 1/2.5 inch     | Rolling      | 2.2 x 2.2       | Multi            | RGB   | PLCC-52      |
| AR0522SRSC09SURA0-DP1 |                   | Pb-free<br>Halide free<br>non AEC-Q<br>and PPAP | Active |      |            |                  |                |              |                 |                  |       | PLCC-52      |
| AR0522SRSC09SURA0-DR  |                   | Pb-free<br>Halide free<br>non AEC-Q<br>and PPAP | Active | CMOS | 5.1        | 60               | 1/2.5 inch     | Rolling      | 2.2 x 2.2       | Multi            | RGB   | PLCC-52      |
| AR0522SRSC09SURA0-DR1 |                   | Pb-free<br>Halide free<br>non AEC-Q<br>and PPAP | Active |      |            |                  |                |              |                 |                  |       | PLCC-52      |
| AR0522SRSM09SURA0-DP  |                   | Pb-free<br>Halide free<br>non AEC-Q<br>and PPAP | Active | CMOS | 5.1        | 60               | 1/2.5 inch     | Rolling      | 2.2 x 2.2       | Multi            | Mono  | PLCC-52      |
| AR0522SRSM09SURA0-DR  |                   | Pb-free<br>Halide free<br>non AEC-Q<br>and PPAP | Active | CMOS | 5.1        | 60               | 1/2.5 inch     | Rolling      | 2.2 x 2.2       | Multi            | Mono  | PLCC-52      |

For more information please contact your local sales support at [www.onsemi.com](http://www.onsemi.com).

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