

PIXEL SENSOR COLUMN AMPLIFIER ARCHITECTURE**ABSTRACT OF THE DISCLOSURE**

A pixel column amplifier architecture creates a reduced noise differential image signal (118) from an pixel sensor array (280). The pixel column amplifier architecture comprises a first double sampling (DS) circuit (230) and a second DS circuit (240) that has the same configuration as the first DS circuit (230). An image signal (38) containing a combination of noise components (74) created on a substrate is coupled to the first DS circuit (230). A reference image signal (102), held in a reset state, represents the noise component of the image signal and is coupled to the second DS circuit (240). Further, a reference voltage source (88) is coupled to a reference input of both the first DS (230) and the second DS (240) circuits. The first DS circuit (230) provides the first side (120) of the differential image signal (118), and the second DS circuit (122) provides the second side of the differential image signal (118).

Figure 1