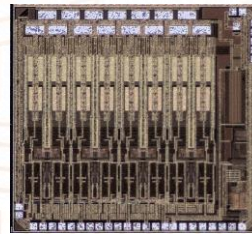
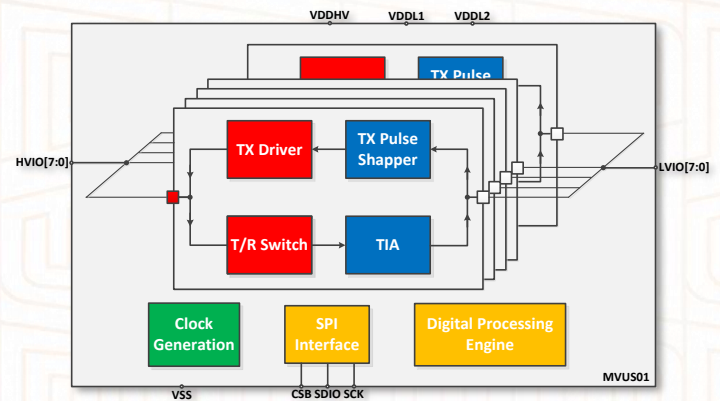


ULTRASOUND AFE TRANSCIVER CHIP FOR CMUT TRANSDUCERS

- 8-channel ultrasound transceiver analog front-end
- RX front-end with analog output (T/R switch, TIA)
- High Voltage TX Driver with input pulse shaping. Supports a wide range of transducer capacitances (200pF-520pF)
- Each RX channel is designed to drive 300Ω-6kΩ resistive loads and up to 200pF capacitive loads
- Operating temperature range from 0 to 85°C
- Fully compliant SPI interface, with fast command for T/R switch configuration



Die Size: 2.5 x 2.5 mm²



Applications

- Ultrasound Medical Imaging
- Ultrasound Proximity Sensing
- Non-destructive Testing

INNOVATING SENSORS

FOR A BETTER WORLD!

MVUS01

Ultrasound AFE Transceiver Chip for CMUT Transducers

The MVUS01 ultrasound transducer interface is the first generation of high-voltage (HV) ultrasound ASICs intended for portable medical imaging probes and other markets. The chip supports pulsing ultrasonic transducers, with excitation voltages of up to 45V, and has high gain and low noise receivers, for increased sensitivity to ultrasonic echoes. The chip is programmable to support a wide range of loads, at reasonable current consumption levels.

RX FEATURES

Programmable TIA Gain	78, 68, 63, 58 dBΩ
Input Bandwidth	~5MHz
Output Noise	120nV/SqrtHz (Max gain)
Current Consumption	13mA typical
Maximum Output THD	-50 dBc

TX FEATURES

Maximum Output Voltage	45V
Current Consumption (2% Duty Cycle)	14mA @ 470pF load
Output Rise/Fall Times	30ns @ 200pF load

* Customization is available. Talk to us!

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ABOUT MEMS VISION

Headquartered in Montreal, Canada, with offices around the world, MEMS Vision capitalizes on a strong portfolio of patents and intellectual property on MEMS and ASICs (integrated circuits), and a team of highly qualified personnel, to offer hardware and software smart sensing solutions to its customers and partners serving the Industrial, Automotive, Medical, and Consumer markets. Our products include sensors for humidity, temperature, absolute pressure, particulate matter, differential pressure, as well as ultrasonic sensors.

Our expertise in developing and manufacturing smart sensors, based on our proprietary MEMS, ASICs, and calibration technologies, enables us to deliver sensor solutions with very low power consumption, very small form factor, and a world-class performance, all at competitive pricing.