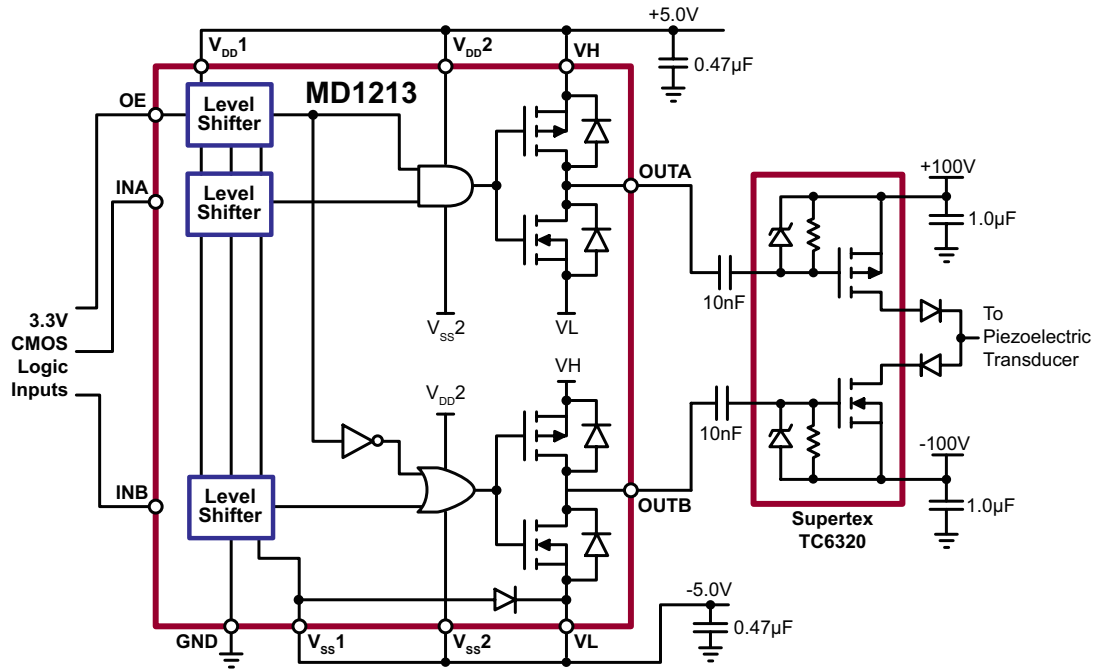


Product Summary Sheet

MD1213

High Speed Dual MOSFET Driver



Typical Application Circuit

Applications:

- ▶ Medical ultrasound imaging
- ▶ Piezoelectric transducer drivers
- ▶ Non-Destructive Testing (NDT)
- ▶ PIN diode driver
- ▶ High speed level translator
- ▶ Clock/line drivers



12-Lead QFN (K6)

Product Overview:

The Supertex MD1213 is a high speed, dual MOSFET driver. It is designed to drive high voltage P and N-channel MOSFET transistors for medical ultrasound and other applications requiring a high output current for a capacitive load. The high-speed input stage of the MD1213 can operate from 1.2 to 5.0V logic interface with an optimum operating input signal range of 1.8 to 3.3V. An adaptive threshold circuit is used to set the level translator switch threshold to the average of the input logic 0 and logic 1 levels. The input logic levels may be ground referenced, even though the driver is putting out bipolar signals. The level translator uses a proprietary circuit, which provides DC coupling together with high-speed operation.

The output stage of the MD1213 has separate power connections enabling the output signal L and H levels to be chosen independently from the supply voltages used for the majority of the circuit. As an example, the input logic levels may be 0 and 1.8V, the control logic may be powered by +5.0 and -5.0V, and the output L and H levels may be varied anywhere over the range of -5.0 to +5.0V. The output stage is capable of peak currents of up to $\pm 2.0A$, depending on the supply voltages used and load capacitance present.

The OE pin serves a dual purpose. First, its logic H level is used to compute the threshold voltage level for the channel input level translators. Secondly, when OE is low, the outputs are disabled, with the A output high and the B output low. This assists in properly pre-charging the AC coupling capacitors that may be used in series in the gate drive circuit of an external PMOS and NMOS transistor pair.

Features:	Benefits:
6ns rise and fall time with 1000pF load	Better imaging
Outputs can swing below ground	Simple to drive P- and N-channel FETs
Low jitter design	Accurate Doppler measurement
Dual matched channels	Accurate beam focusing



High Speed, Dual MOSFET Driver

Ordering Information / Availability

Part Number	Package Option	Samples	Lead Time
MD1213K6-G	12-Lead QFN (Green)	Now	4-5 Weeks

-G indicates the part is RoHS compliant (Green).



Product Contact

For any questions regarding the MD1213, please contact your local area Supertex sales office, or contact the main office in the US at:

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