



New Product Announcement

PAM8904Q

Automotive 18V_{PP} Piezo-Sounder Driver with Auto Standby

The PAM8904Q is an Automotive Compliant IC designed for driving a ceramic/piezo sounder or speaker with 18V_{PP} from a 3V power supply.

The PAM8904Q's programmable charge-pump boost converter operates in 1x, 2x and 3x modes, boosting up to 9V and switching at a fixed frequency of 1.0MHz. Requiring a minimal number of external components it can drive capacitive loads up to 15nF. Its unique drive technology ensures minimal inrush current, low EMI and high efficiency.

To maximize efficiency when there is no valid input signal its auto-standby feature puts the PAM8904Q into sleep mode. A forced shutdown is also available.

For a more robust solution the PAM8904Q includes overtemperature shutdown, overcurrent and short-circuit protection.

The PAM8904Q is available in a 16pin U-QFN3030-16 package and is qualified to AEC-Q100 grade 2 supporting PPAP documents.



The Diodes Advantage

The PAM8904Q provides a Simple and Highly Efficient Sounder Driver for Automotive Applications

- **Automotive Compliant, Qualified to AEC-Q100 Grade 2**
Meets automotive requirements including PPAP documentation
- **Up to 18V_{PP} output from a 3V supply**
High sound levels from a low supply voltage
- **1x, 2x and 3x selectable charge-pump boost modes**
Improves system design flexibility and efficiency
- **2.3 to 5V supply range**
Simplifies power supply design in low voltage systems
- **Efficient Solution**
 - Automatic standby and wake-up control or manual stand-by control
 - No voltage across output at shutdown mode
- **Input signal 20 Hz to 300kHz**
Wider input suitable for different applications of audio or sounders

Applications

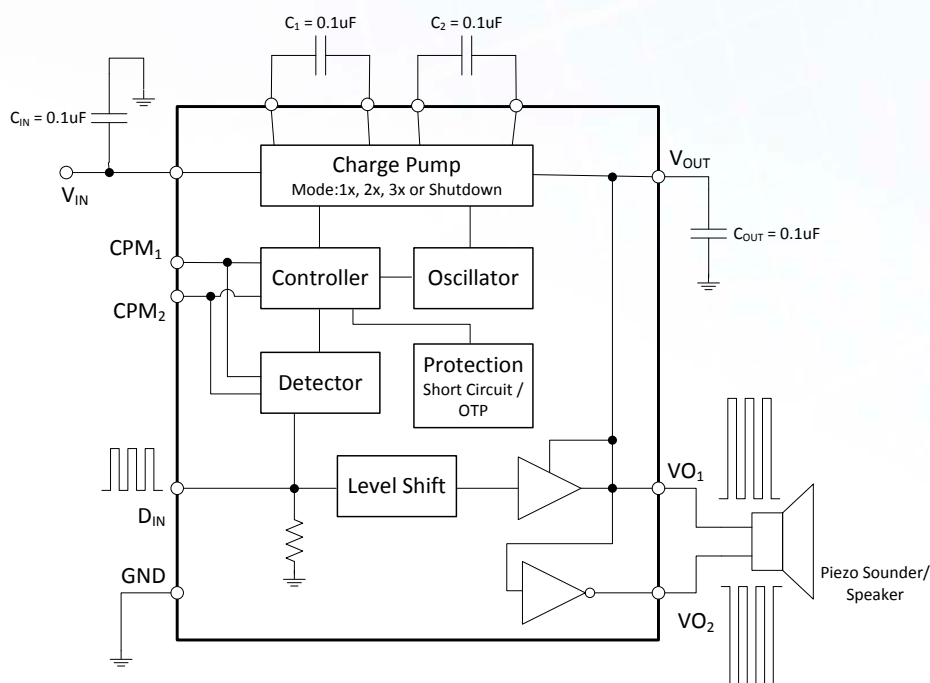
- Automotive Sounders
- Dash Board Alarms
- GPS
- Key Fobs
- Automotive Security



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Typical Application (Differential Output):



Diodes' Piezo and Ceramic Speaker Drivers

Part Number	Audio Input		Audio Output		Gain / OP	VDD	Temp	Automotive Qualification
	Channels	Type	Output Voltage	Anti Sat	dB / Vout	(V)	°C	
PAM8902A	Mono	Differential	30Vpp	Yes	18,22,26	2.7 - 5.5	-40 to +85	N/A
PAM8902H	Mono	Differential	30Vpp	No	31,26,32.5	2.5 - 5.5	-40 to +85	N/A
PAM8904	Mono	Pulsed	18Vpp	No	V _{DD} x1 V _{DD} x2 V _{DD} x3	2.0 - 5.0	-40 to +85	N/A
PAM8904Q	Mono	Pulsed	18Vpp	No	V _{DD} x1 V _{DD} x2 V _{DD} x3	2.0 - 5.0	-40 to +105	AEC-Q100 Grade 2

Ordering Information

Device	Packaging	Part mark	Reel size	Tape width	Quantity
PAM8904QJER	U-QFN3030-16L	PAM8904	7"	8mm	3,000