



**THE DATASHEET OF  
MLX90287LZC-AAA-000-RX**

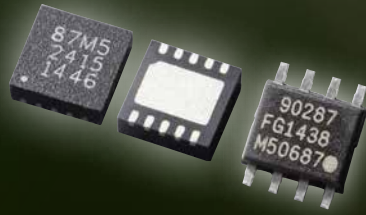


# Melexis

INSPIRED ENGINEERING

MLX90287 & MLX90297

## SINGLE-COIL FAN DRIVERS



The hummingbird's beating wings flap at extremely high frequencies, typically around 50 times per second. This allows it to fly at speeds exceeding 15 m/s, to fly backwards or to seemingly be suspended in the air in perfect balance. What better animal to reflect the motor/control driver and actuator capacitors?

## 12V ROBUST FAN DRIVERS

### MLX90287 & MLX90297

The MLX90287 & MLX90297 are the 2nd GEN of all-in-one single-coil fan drivers with highly sensitive hall sensor using AGC control for optimal low noise/high efficiency commutation control regardless of the magnetic field strength. The PWM input allows controlling the fan speed in combination with a number of resistor-configurable settings to adapt the speed curve to application specific requirements. Targeting low noise fan control in VGA card cooling applications, the GEN II low noise motor control features also have been leveraged in demanding home appliance, white goods, industrial and automotive cooling systems.

### KEY FEATURES

- ✓ Certification
  - AECQ-100
- ✓ Low BOM cost
  - Minimum discrete components
  - Single layer pcb, even half size possible
- ✓ VGA speed curves



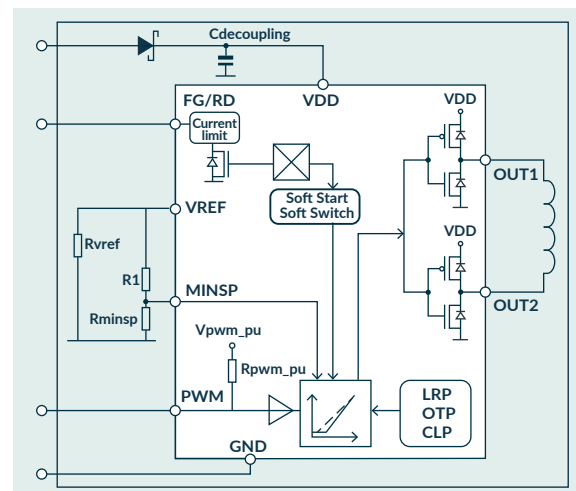
### QUICK REFERENCE

| Quick Reference      | MLX90287      | MLX90297                     |
|----------------------|---------------|------------------------------|
| Minimum speed        | Configurable* | Configurable*                |
| Speed curve          | Fixed         | Configurable*<br>10%/20%/30% |
| Average Fan current  | < 450 mA      | < 600 mA                     |
| Motor Power          | 5 W           | 7 W                          |
| Current limiting     | No            | Yes                          |
| Soft start           | Yes           | Yes                          |
| Soft switching       | Yes           | Yes                          |
| Reverse polarity     | Built-in      | External diode               |
| Supply voltage range | [4.5V, 18V]   | [3.3V, 18V]                  |
| ESD—HBM**            | 7 kV          | 9 kV                         |

\* Configurable by external resistor (Rvref, Rminsp, R1).

\*\* Human Body Model according AEC-Q100-002 standard.

### MLX90297 SCHEMATIC



FOR MORE INFORMATION: [WWW.MELEXIS.COM/MLX90287](http://WWW.MELEXIS.COM/MLX90287)  
[WWW.MELEXIS.COM/MLX90297](http://WWW.MELEXIS.COM/MLX90297)

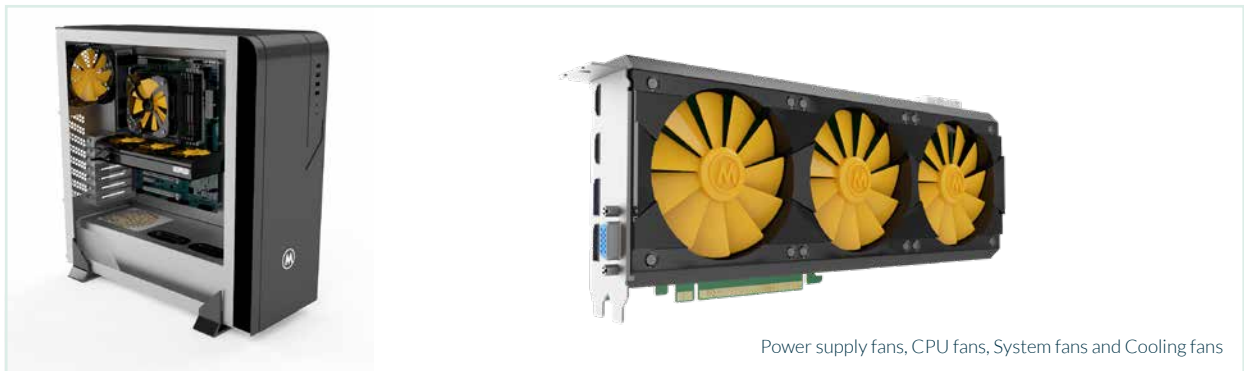
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## ORDERING INFORMATION

| Order code*         | Grade               | Package                  | FG/RD | Current limit |
|---------------------|---------------------|--------------------------|-------|---------------|
| MLX90287KZC-AAA-000 | Industrial/Consumer | ZC: Straight leads SOIC8 | FG    | N/A           |
| MLX90297KZC-AAF-108 | Industrial/Consumer | ZC: Straight leads SOIC8 | FG    | 800 mA        |
| MLX90297KZC-ABF-108 | Industrial/Consumer | ZC: Straight leads SOIC8 | RD    | 800 mA        |
| MLX90297KLW-AAF-109 | Industrial/Consumer | LW: DFN10 3x3x1          | FG    | 960 mA        |
| MLX90297LLW-AAF-108 | Automotive          | LW: DFN10 3x3x1          | FG    | 800 mA        |
| MLX90297LLW-AAF-206 | Automotive          | LW: DFN10 3x3x1          | FG    | 660 mA        |
| MLX90297LLW-ABF-206 | Automotive          | LW: DFN10 3x3x1          | RD    | 660 mA        |

\* More ordering codes are available, please contact your sales representative for more information.



## APPLICATION VISUALS



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Click below to explore more details on WIN SOURCE:

-  [View MLX90287LZC-AAA-000-RX on WIN SOURCE](#)
-  [Melexis Technologies NV Information](#)

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