All-In-One Single-coil Fan drivers

Since 2000 MELEXIS has been INNOVATING in the fan market offering QUALITIVE and COST EFFECTIVE fandrivers



"With the expansion of its single coil fandriver family Melexis continues to offer its advance design capabilities in hall sensing and motor control to the benefit of the fandriver market."

INNOVATION

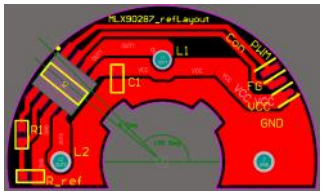
- Soft start and soft switching for low acoustic noise
- Integrated reverse polarity protection, avoids the need for protection diode, and allows smaller decoupling capacitor
- All-In-One single coil fandriver with PWM control in straight leads SOIC8 package
- Wettable flanks QFN package allows assembly using standard optical inspection (no XRAY required)

QUALITY

- AECQ-100 compliant
- 100% production tested at two temperatures
- Qualified to automotive standard including Automotive PPAP
- State of the art protection against ESD and EOS

COST

- Single layer pcb, even half size pcb possible.
- Low BOM cost: Minimum discrete components
  - Integrated high sensitive hall sensor,
  - Integrated reverse polarity protection diode.
- One IC fits all:
  - Configurable speed curve
  - High drive strength up to 600mA
  - Standardized pcb / stator design, from 40mm to 120mm fans



Layout example :
Half size single layer pcb



Picture :
Melexis *straight leads PWM Single coil fandriver on a single layer pcb* ***(on the left)****.*
Compared to a TSSOP16 competitor with external straight leads SOT hall element ***(on the right)****.*

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Target Applications



CPU/VGA/PSU



Game consoles



White goods



Automotive: LED headlamp, Battery cooling, VGA

Quick Reference	MLX90287	MLX90297
Minimum speed	Configurable	Configurable
Speed curve	Fixed	Configurable
Average Fan current	< 450 mA	< 600 mA
Current limiting	No	Yes
Soft start	Yes	Yes
Soft switching	Yes	Yes
Reverse polarity	Built-in	External diode
Supply voltage	[4.5, 18]	[3.3, 18]
ESD—HBM	6kV	9kV

Order code (*)	Grade	Package	FG/RD	Current Limit
MLX90287KZC-AAA000-RX	Industrial/Consumer	ZC: Straight leads SOIC8	FG	n/a
MLX90287LZC-AAA000-RX	Automotive	ZC: Straight leads SOIC8	FG	n/a
MLX90287LLD-AAA000-RX	Automotive	DFN10 3*3mm	FG	n/a
MLX90297KZC-AAA008-RX	Industrial/Consumer	ZC: Straight leads SOIC8	FG	Yes
MLX90297KZC-ABA008-RX	Industrial/Consumer	ZC: Straight leads SOIC8	RD	Yes
MLX90297KLD-AAA009-RX	Industrial/Consumer	DFN10 3*3mm	FG	Yes

(*) More order code options available. Please contact your sales representative for more information.

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Printed for: Pieter Goyens pgoyens@melexis.com.
Printed on: May 19 2010.
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