



New Product Announcement

DMTH8001STLWQ
DMTH10H1M7STLWQ
DMTH10H2M5STLWQ

Automotive-Compliant, Low- $R_{DS(ON)}$, 80V and 100V, TOLL-Packaged MOSFETs Deliver High Current Capability

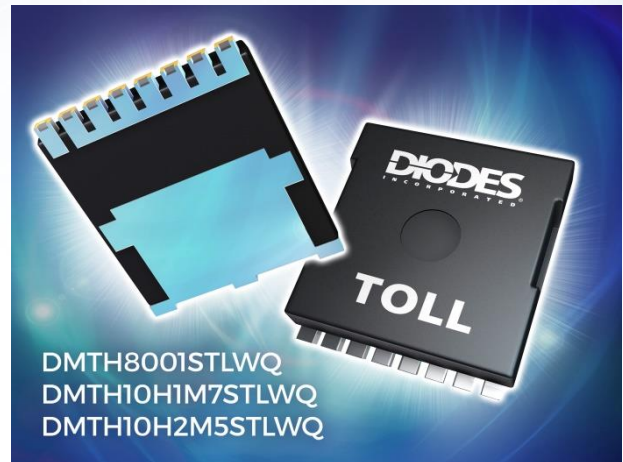
The 80V DMTH8001STLWQ, 100V DMTH10H1M7STLWQ, and 100V DMTH10H2M5STLWQ are automotive-compliant MOSFETs packaged in the thermally efficient and compact PowerDI@1012-8 (TOLL) package.

Designed to handle currents up to 300A, the TOLL package occupies 20% less PCB area than the industry-standard TO263. With an off-board profile of just 2.4mm, which is 50% less than the TO263, the TOLL is ideally suited in compact and high-density designs.

The low package inductance of the TOLL provides improved EMI performance and the tin-plated grooved leads ensure that the needs of automatic optical inspections (AOI) are met.

The DMTH8001STLWQ, DMTH10H1M7STLWQ, and DMTH10H2M5STLWQ are qualified to AEC-Q101, PPAP capable, and are manufactured in IATF 16949 certified facilities.

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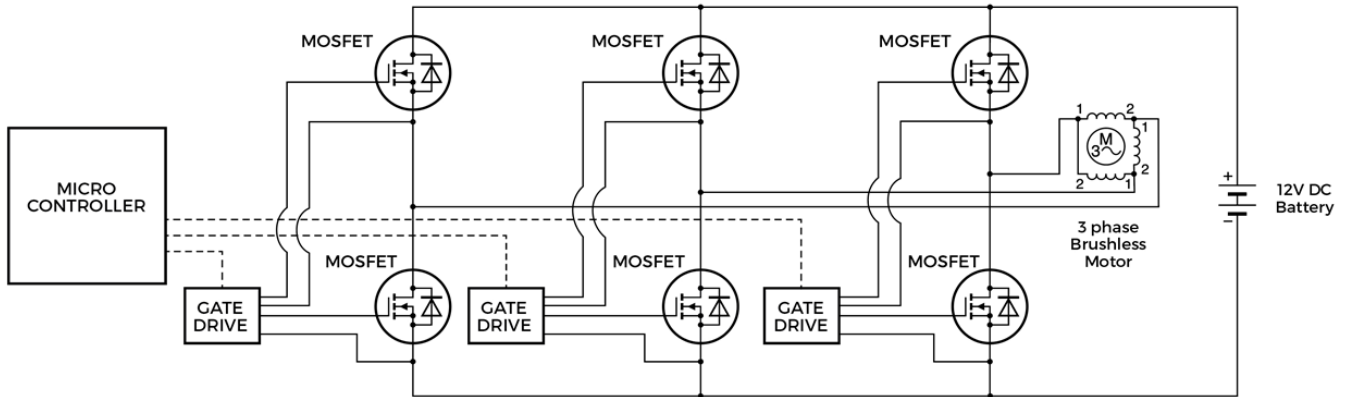
The Diodes Advantage

- **Low $R_{DS(ON)}$**
Minimizes power losses and increases efficiency
- **Low R_{thJC} of 0.7°C/W**
Low thermal resistance enables high currents of up to 300A
- **Low packaged inductance**
Reduces parasitic inductance and improves EMI performance
- **PCB footprint of just 119mm²**
Occupies 20% less PCB area than that of the TO263
- **Tin-plated grooved leads**
Enable visual inspection by automatic optical inspection (AOI)
- **Off-board profile of 2.4mm**
50% lower profile than TO263, enabling compact design
- **Automotive-compliant**
Qualified to AEC-Q101, PPAP capable, and manufactured in IATF 16949 facilities

Applications

- DC-DC converters
- Integrated starter alternators
- High current BLDC applications

Typical Application Schematic



TOLL N-MOSFET Product Portfolio

Product	Package	V _{DS} (V)	V _{GSS} (V)	I _D (A)	V _{GS(TH)} (V)	Max R _{DS(ON)} @V _{GS} =10V (mΩ)	Q _G @V _{GS} =10V (nC)	C _{ISS} (pF) @25V _{DSS}	E _{AS} (mJ)	Max T _j (°C)
DMTH8001STLWQ	PowerDII1012-8 (TOLL)	80	20	231	2-4	1.7	138	13185	760	175
DMTH10H1M7STLWQ	PowerDII1012-8 (TOLL)	100	20	267	2-4	2	147	9871	800	175
DMTH10H2M5STLWQ	PowerDII1012-8 (TOLL)	100	20	248	2-4	2.5	124	8450	701	175

Cross Reference

Part	Orderable (OPN)	Cross Orderable P/N
DMTH8001STLWQ	DMTH8001STLWQ-13	NVBLS1D7N08H IPT019N08N5
DMTH10H1M7STLWQ	DMTH10H1M7STLWQ-13	FDBL86062-F085 IPT020N10N3 IPT020N10N5
DMTH10H2M5STLWQ	DMTH10H2M5STLWQ-13	FDBL86063-F085 IPT026N10N5