



New Product Announcement

DMNH4015SSDQ and
DMTH6016LSDQ

Automotive-Compliant Dual MOSFETs Minimize Power Losses to Deliver Cost-Effective High Efficiency

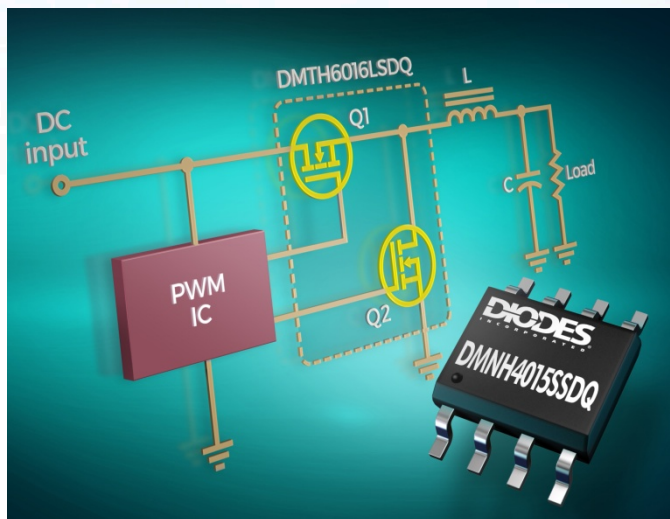
Featuring low figure-of-merit on-resistance and gate charge specifications, the DMNH4015SSDQ and DMTH6016LSDQ dual, co-packaged enhancement mode MOSFETs minimize power losses, enabling cost-effective, high efficiency automotive compliant power management solutions.

Targeted at synchronous rectification applications in automotive instrumentation clusters, head-up displays, and infotainment, navigation and driver assistance systems, the DMNH4015SSDQ and DMTH6016LSDQ are qualified to AEC-Q101 and supported by a PPAP (production part approval process).

When coupled with a PWM control IC, these dual MOSFETs are capable of creating highly efficient and cost-effective DC-DC converters. The DMTH6016LSDQ, for example, when switched at a frequency of 400kHz delivers a 5V output with a load current of 2A and achieves an efficiency of 95%.

Similarly, the 40V DMNH4015SSDQ will deliver 5V at 2A and achieves an efficiency of 91%.

Both devices are 100% avalanche rated, to withstand the high pulse energy that can result from inductive loads, and are specified with a maximum junction temperature of 175°C.



The Diodes Advantage

- **Low Figure of Merit ($R_{DS(ON)} \times Q_G$)**
Minimizes power losses, increases efficiency
- **Maximum Junction Temperature of 175°C**
Ideal for use in high ambient temperature environments.
- **100% Unclamped Inductive Switching**
Each device is subject to an unclamped inductive switching (UIS) test to ensure that the device can withstand avalanche energy generated by inductive loads, leading to more reliable and robust end applications.
- **Automotive Compliant**
 - Qualified to AECQ-101
 - Supported by a full PPAP for full traceability

Circuit Function

- Synchronous Rectification

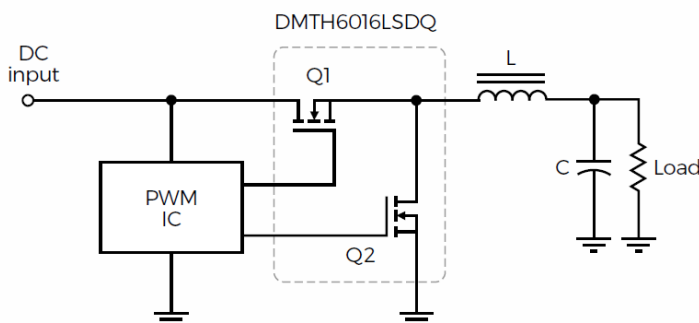
Applications

- Instrument clusters
- Infotainment
- Head-up displays
- Driver assistance system

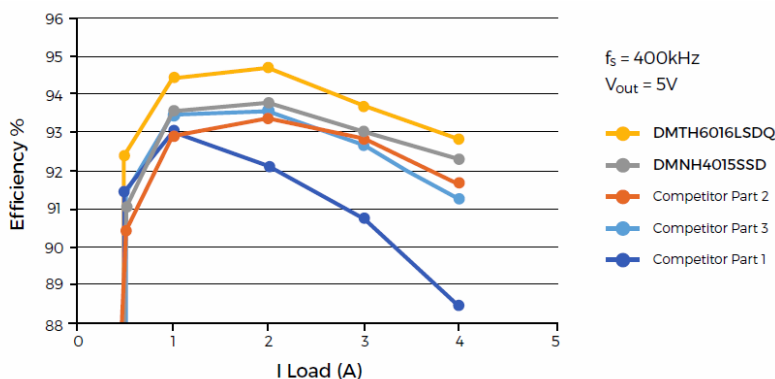
Product Table

Product	Package	Polarity	V _{DS} (V)	V _{GSS} (V)	I _D (A)	V _{GS(TH)} (V)	R _{DS(ON)} MAX (mΩ)		Q _G typ @V _{GS} =10V (nc)	Typ. C _{ISS} (pF) @25V _{DSS}	E _{AS} (mJ)	I _{AS} (A)	T _J (°C) max
							@10V	@4.5V					
DMNH4015SSDQ	SO8	N+N	40	20	8.4	1-3	15	20	33	1,938	33	25	175
DMTH6016LSDQ	SO8	N+N	60	20	7.8	1-2.5	19.5	28	8.4	864	11.7	15.3	175

Circuit Diagram



Efficiency vs. Current



Cross Reference

Diodes	Infineon	ON Semi	NXP	Vishay
DMNH4015SSDQ	-	-	-	SQ4284EY
DMTH6016LSDQ	IRF7351	-	-	SQ4946AEY