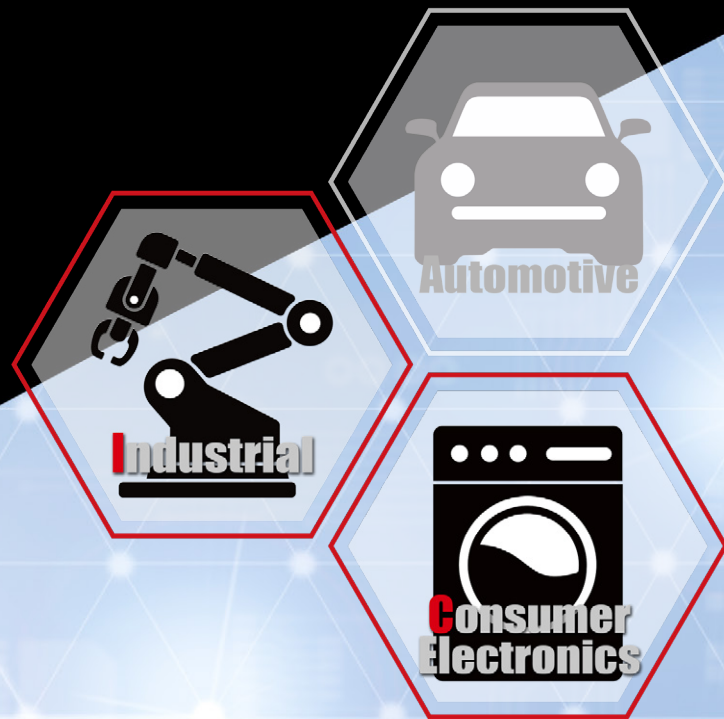


Revolutionizes AC-DC power supply circuits

650V EcoGaN™ Power Stage ICs

BM3G015MUV-LB, BM3G007MUV-LB



EcoGaN™ is a trademark or registered trademark of ROHM Co., Ltd.

The BM3G0xxMUV-LB series of power stage ICs incorporates ROHM's 650V EcoGaN™ together with a dedicated gate driver that maximizes performance as well as additional functions and peripherals. The integrated design facilitates replacement of silicon power semiconductor circuits in primary power supplies.

Features

- **Power stage circuit ICs simplify mounting of GaN devices**

Combines a 650V EcoGaN™, dedicated gate driver, additional functions, and peripheral components in a single package

- **Makes it easy to replace existing power semiconductor circuits**

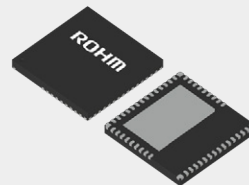
2.5V to 30V drive voltage range, 15μs (Typ) startup time, 11ns to 15ns propagation delay

- **Low loss vs general products contributes to smaller sets**

20% lower power loss, and built-in peripherals reduce the number of external parts from eight to just one



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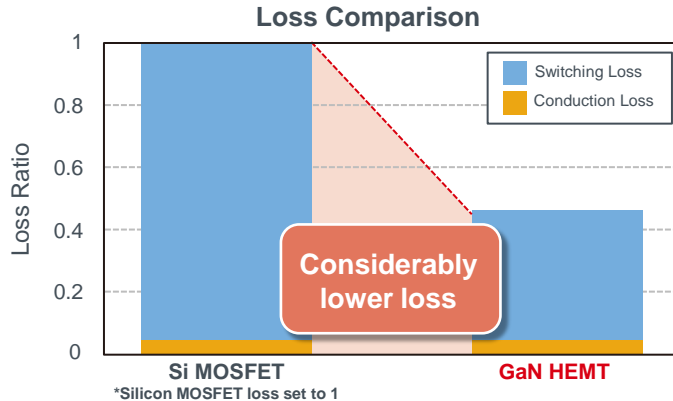


VQFN046V8080

8.0×8.0×1.0mm Pitch0.5mm

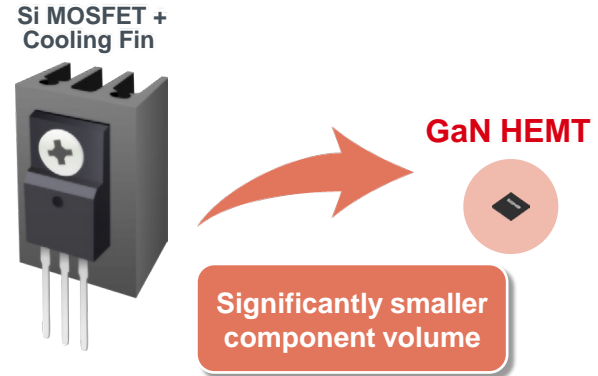
Adopting GaN HEMTs (High Electron Mobility Transistors) provides:

Low loss with high efficiency



Faster switching dramatically reduces loss

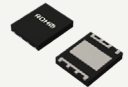
Greater miniaturization



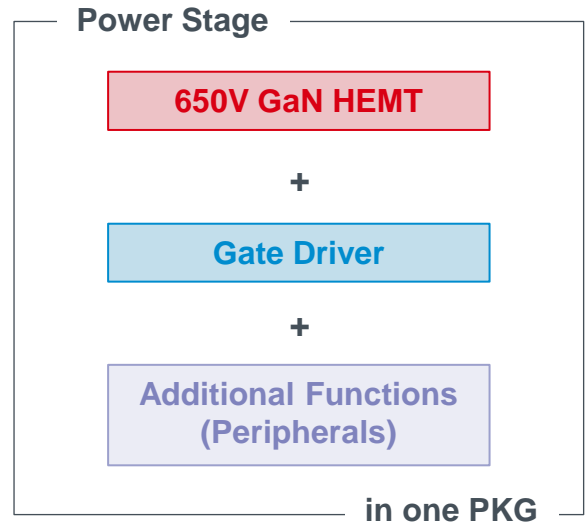
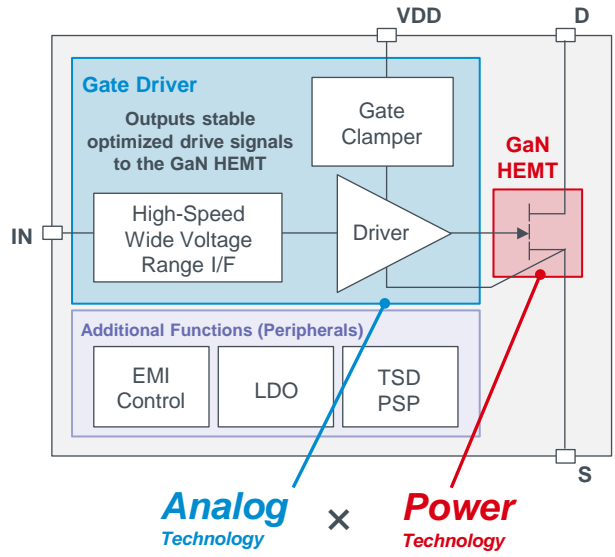
Low heat generation (low ON resistance) minimizes volume



ROHM low ON resistance high-speed switching GaN HEMTs



BM3G0xxMUV-LB series Block Diagram



Maximizes GaN HEMT performance

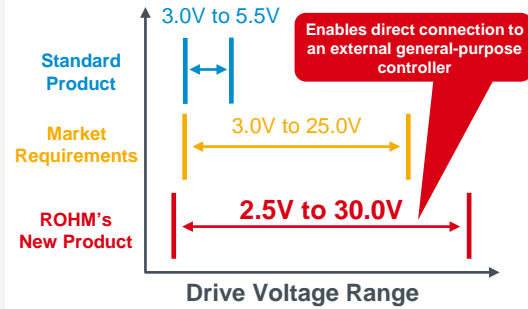
Monolithic design eliminates the need for troublesome GaN HEMT drive adjustment



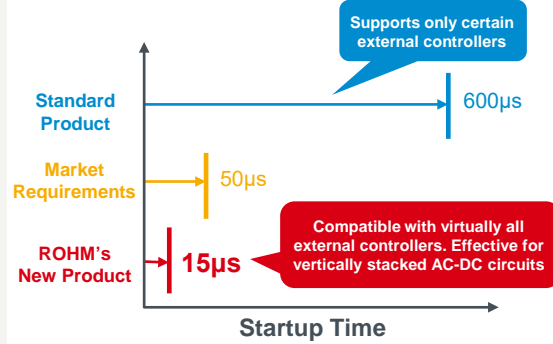
Facilitates GaN implementation

Compatible with all primary power supply circuits (PFC, AC-DC)

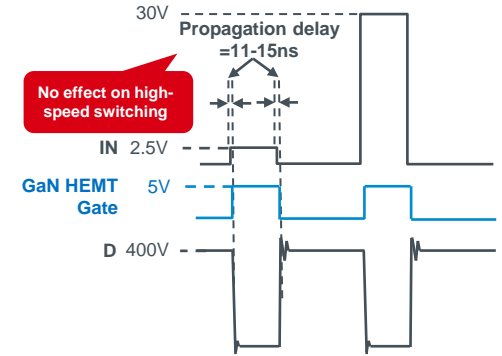
Broad Drive Voltage Range (2.5 to 30.0V)



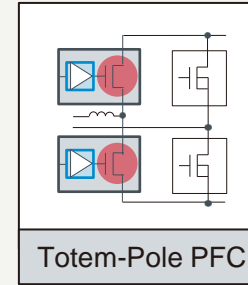
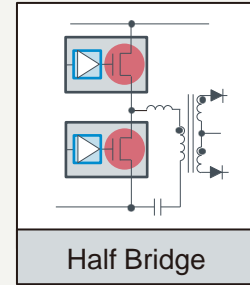
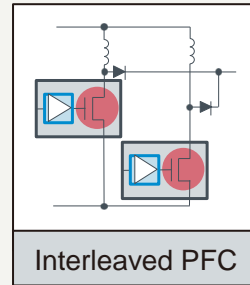
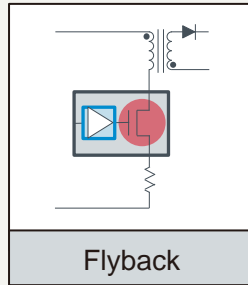
Fast Startup Time (15μs Typ)



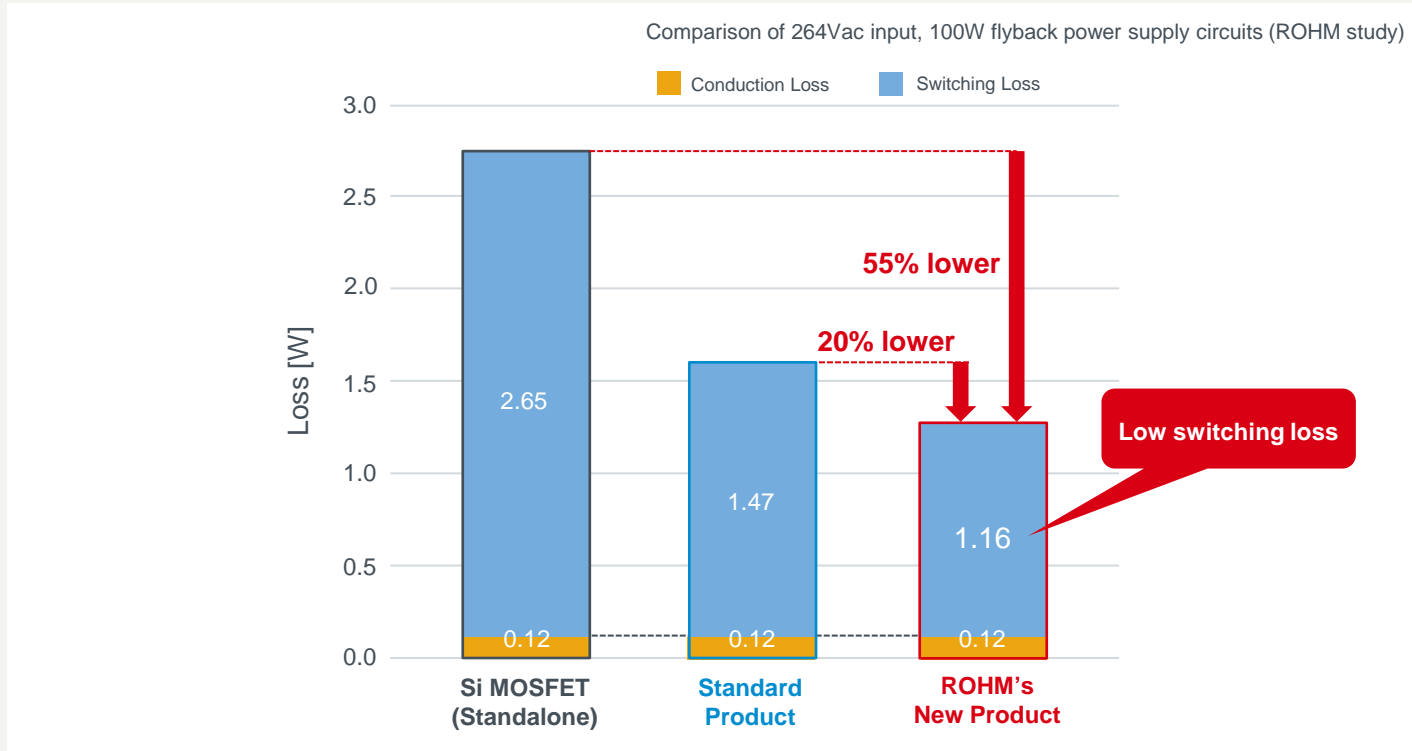
Short Propagation Delay (11 to 15ns Typ)



Circuit Topology Examples



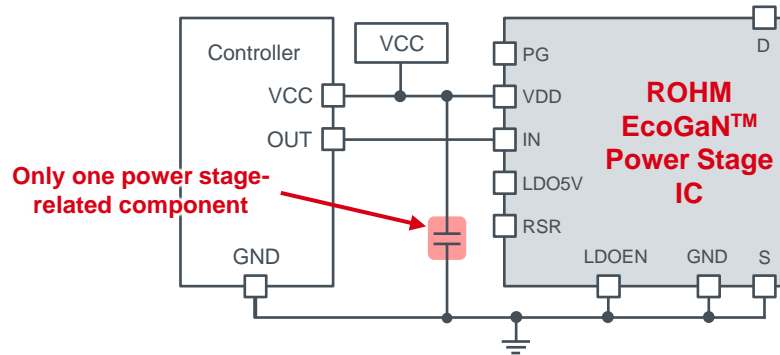
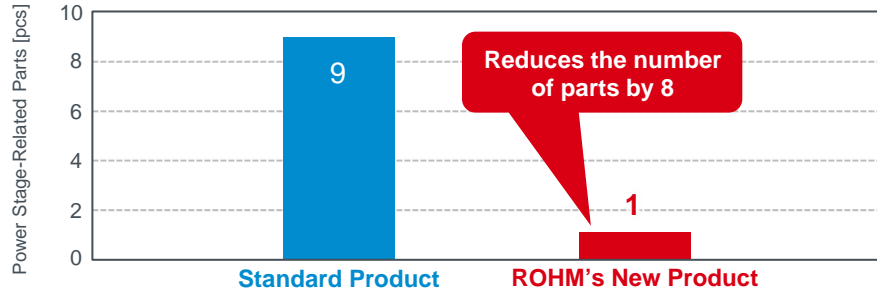
Lower Power Consumption Possible



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Reduces Application Size

Requires just one external part



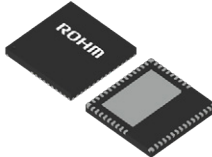




Market Requirements	EcoGaN™ Power Stage IC ROHM	GaN Power Stage IC Standard Product	Standalone EcoGaN™ ROHM	General Standalone GaN HEMT	Standalone Si MOS
Smaller	Best	Best	Good	Good	Bad
Ease of Design	Best	Good	Good	Good	Best
Reliability	Best	Good	Good	Good	Best
Loss	Best	Good	Best	Good	Bad
Additional Functions	Best	Best	Bad	Bad	Bad

ROHM EcoGaN™ power stage ICs provide superior performance that meet market requirements

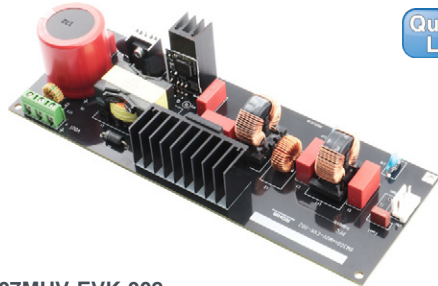
EcoGaN™ is a trademark or registered trademark of ROHM Co., Ltd. * ROHM July 2023 study

EcoGaN™ Power Stage IC Lineup/Evaluation Boards

Part No.	Drain Pin Voltage (Max) [V]	Input Voltage Range [V]	Supply Pin Voltage [V]	Supply Pin Operating Current (Typ) [μA]	Supply Pin Quiescent Current (Typ) [μA]	ON Resistance (Typ) [mΩ]	Turn ON Delay Time (Typ) [ns]	Turn OFF Delay Time (Typ) [ns]	Operating Temperature Range [°C]	Package
New BM3G015MUV-LB  	650	-0.6 to +30	6.25 to 30	450	150	150	11	15	-40 to +105	 VQFN046V8080 (8.0×8.0×1.0mm)
New BM3G007MUV-LB  				650	180	70	12			

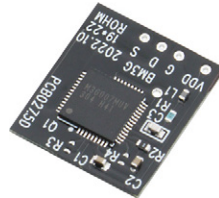
 Click on the icon to access the product page on ROHM's website.  Click on the icon to access the product datasheet on ROHM's website.

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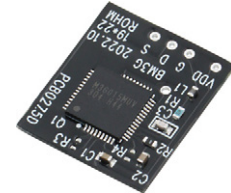
[Quick Link](#) 

BM3G007MUV-EVK-002
PFC 400V 240W BM3G007MUV Evaluation Board



[Quick Link](#) 

BM3G007MUV-EVK-003



[Quick Link](#) 

BM3G015MUV-EVK-003

Notes

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