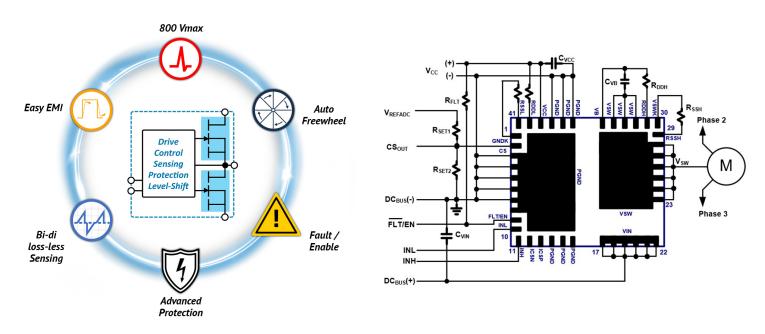
GaNSense™ Motor Drive ICs for Home Appliance and Industrial



The new GaNSense™ Motor Drive ICs integrate high performance eMode GaN FETs with integrated gate drive, control and protection to achieve unprecedented high-frequency and high efficiency operation. GaNSense motor drive technology is also integrated which enables real-time, accurate sensing of voltage, current and temperature to further improve performance and robustness not achieved by any discrete GaN or discrete silicon device.



High efficiency and integration with full robustness



GaNSense motor drive enables integrated bidirectional loss-less current sensing which eliminates external current sensing resistors and increases system efficiency. GaNSense motor drive also enables short circuit and over-temperature protection to increase system robustness. For applications up to 600W.

Features	Benefits
Highest integration	15% smaller system size, higher reliability through less components, less design complexity and faster time to market
Bi-directional loss-less current sensing	0.2% lower losses, no hotspot
Full HS/LS short-circuit protection	Robust operation without catastrophic failure
Full slew rate control	20% smaller EMI filter, no motor damage
Automatic freewheeling	0.1% lower losses, no controller loading
Fault communication and HW enable	Full power stage control, less field failures



PQFN 6x8



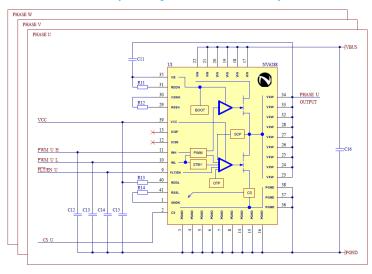
PQFN 8x10



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Typical application schematic (one phase shown)



Reduced system cost and complexity

- No more shunt resistors, avoid hot spot and power dissipation
- Less external components for lower system cost and improved reliability
- Full protection against output short-circuits
- Lower, adjustable EMI for smaller filter size and higher motor reliability

Segment	Application
Home appliance	Air conditioner, heatpump, washing machine, dryer, dishwasher, refrigerator, air purifier, hair dryer
Low power industrial	Circulators, water pumps, cooling pumps, HVAC systems, exhaust fans, cooling fans, home and building automation, material handling, window and door openers

















Product portfolio

Part number	Family	System Power (W)	R _{DS(ON)} (mΩ)	Package (PQFN)	Current Sensing (loss-less)	Short-circuit protection	dv/dt control	Autonomous Freewheeling Mode	External Current Sense	Fault communication	ОТР
NV6257(-01)	ĜàNSense™ Motor Drive ICs	400	2x 170	6x8	Bi-directional	High Side & Low-Side		No	No	HW-based Enable / Disable	Yes
NV6257(-02)								Yes -	INU		
NV6257(-03)					Uni-directional				Yes		
NV6287(-01)		500	2x 170	8x10	Bi-directional			No	No		
NV6287(-02)								Yes			
NV6287(-03)					Uni-directional				Yes		
NV6288(-01)		600 2x 1			Bi-directional			No	- No		
NV6288(-02)			2x 120	8x10				Yes			
NV6288(-03)					Uni-directional				Yes		

