

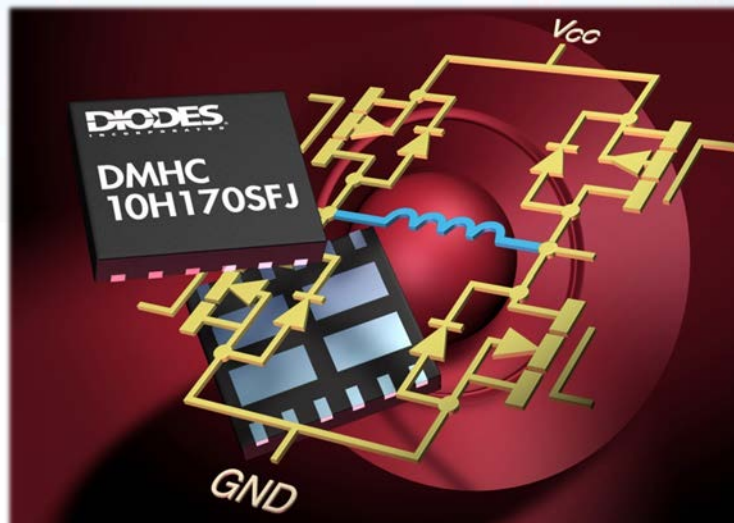


MOSFET H-bridge Shrinks Footprint

Diodes Incorporated has extended its family of dedicated MOSFET H-bridges with the DMHC10H170SFJ, designed for space limited ultrasonic transducer arrays, DC motor driving and inductive wireless charging circuits.

Providing the industry's smallest 100V H-bridge in a footprint of only 5mm x 4.5mm, this can replace four SOT23 or two SO-8 packages to save PCB space. This enables smaller array designs in the driving of ultrasonic transducers for phased array industrial inspection and marine sonar systems.

For samples and quotations please contact your nearest Diodes sales office or representative.



The Diodes Advantage

The MOSFET H-bridges co-package 2x nMOS and 2x pMOS that can replace four single devices or two sets of complementary devices.

▪ Reduce Footprint

In DFN5045 package, with 5mm x 4.5mm footprint, these H-bridges save PCB space, reduce component count, and assembly costs.

▪ Max Drain Voltage

100V V_{DSS} provides sufficient headroom for the intended 48V rails.

▪ High Pulsed Current

11A peak pulse capability allows for a high in-rush current to be drawn safely during the start-up of the inductive load.

▪ Logic Level Drive

5V gate drive allowing direct interface with MCU logic level signals.

Applications

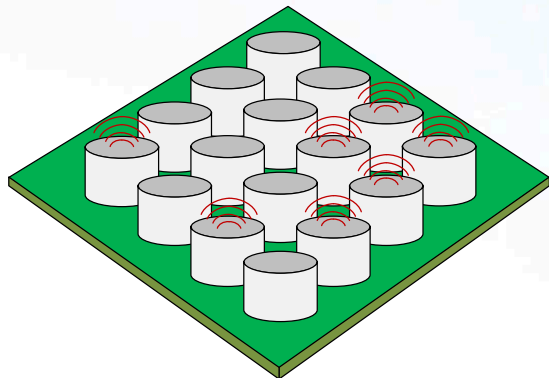
- Ultrasonic transducer arrays for marine echo-location systems
- Phased array ultrasonics for material flaw inspection in manufacturing
- DC Motors in telecoms 48V fan driving
- Inductive Wireless Charging (DMHC3025LSD)
- DC motor driving in automotive (DMHC4035LSDQ)
- Single Phase Brushless DC (BLDC) Motors



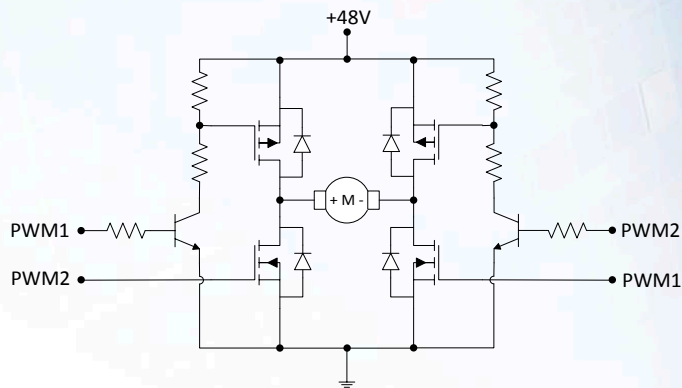
New Product Announcement

DMHC10H170SFJ MOSFET H-bridges

DMHC10H170SFJ H-bridge Applications



Array of 16 ultrasonic transducers each driven individually by DMHC10H170SFJ H-bridge to enable a Phased Array for steerable and focused beams.



DMHC10H170SFJ H-bridge driving a DC motor in a 48V telecom fan.

MOSFET H-bridge Portfolio

Part Number	Polarity	V_{DSS} (V)	V_{GSS} (V)	I_D (A)	I_{DM} (A)	$R_{DS(on)}$ max @4.5V (m Ω)	$R_{DS(on)}$ max @10V (m Ω)	Q_g typ @10V (nC)	Package
DMHC3025LSD	2xN	30	± 20	6.0	60	40	25	11.7	SO8
	2xP	-30	± 20	-4.2	-30	80	50	11.4	
DMHC4035LSD	2xN	40	± 20	4.5	25	58	45	12.5	SO8
	2xP	-40	± 20	-3.7	-15	100	65	11.1	
ZXMHC6A07N8	2xN	60	± 20	1.8	7.1	350	250	3.2	SO8
	2xP	-60	± 20	-1.4	-6.0	600	400	5.1	
ZXMHC10A07N8	2xN	100	± 20	1.0	4.3	900	700	2.9	SO8
	2xP	-100	± 20	-0.8	-3.6	1,450	1,000	3.5	
DMHC10H170SFJ	2xN	100	± 20	2.9	13	200	160	9.7	DFN5045
	2xP	-100	± 20	-2.3	-11	300	250	17.5	

Refer to: [http://www.diodes.com/catalog/H-Bridge MOSFETs_32](http://www.diodes.com/catalog/H-Bridge_MOSFETs_32)