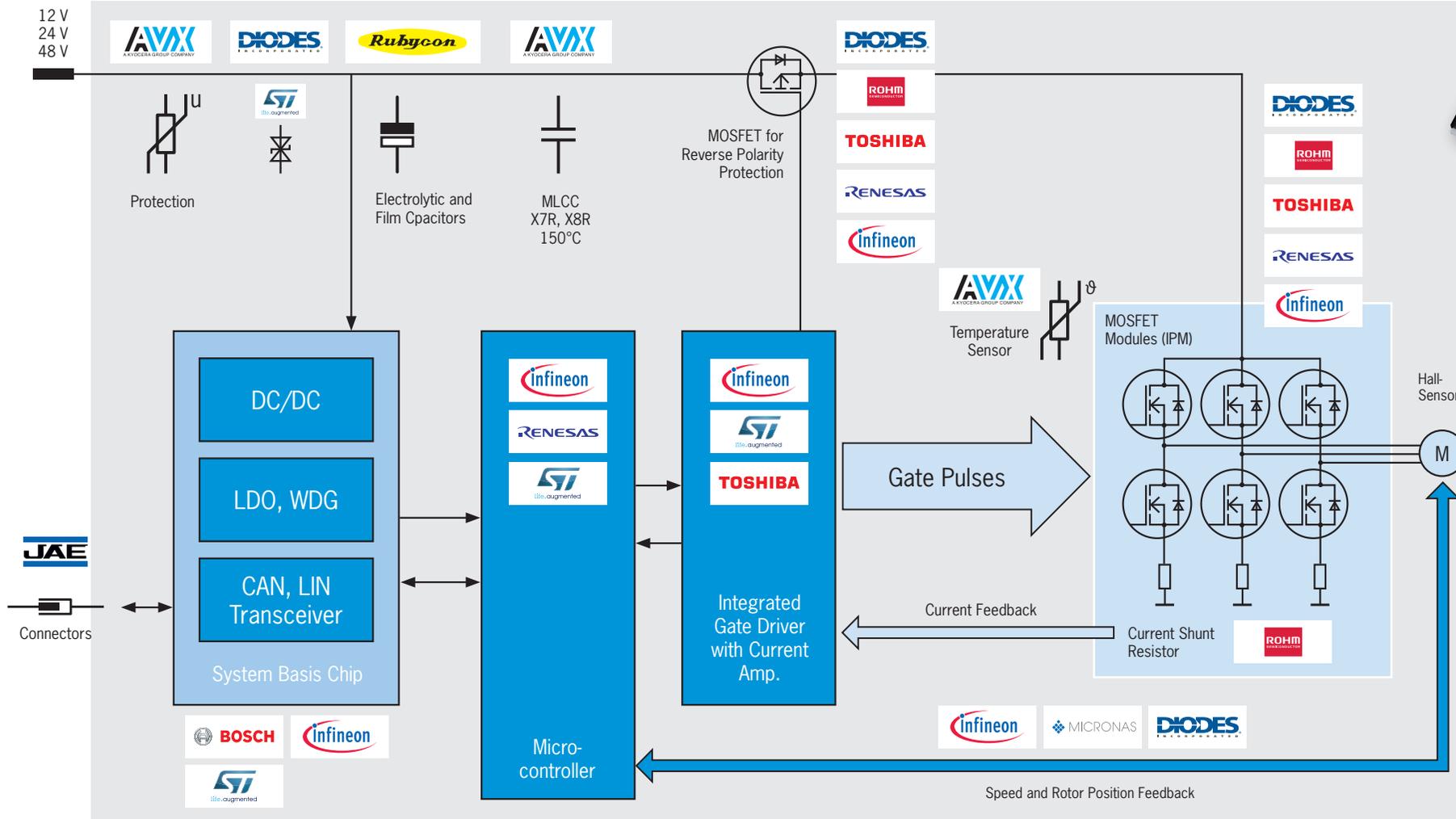




Discover Innovation in Motion

Medium integrated BLDC Motor Control

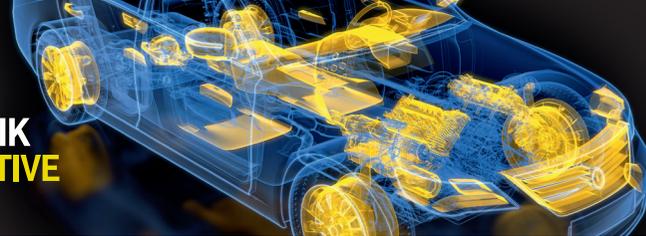
AUTOMOTIVE Products



TO-Leadless (TOLL) is the innovative package for high current applications with a 30% footprint reduction whilst eliminating electromigration. High current applications such as light electric vehicles and high power drives often result in MOSFETs being used in parallel, driving up board space and cost - not any longer. Infineon's TOLL MOSFET package is optimized to handle currents of up to 300A, increasing power density with a substantial reduction in footprint. A footprint reduction of 30% compared to D2PAK, together with a height reduction of 50%, results in an overall space saving of 60% enabling much more compact designs. The problem of electromigration is a challenge in high power and high temperature applications as well. Here again TOLL is the ideal package solution.

APPLICATIONS: Auxilliary drives, E-Booster, pumps, fans, BLDC motor control, DC-motor replacement
FEATURES: Long life, robust & maintenance-free, bus controlled, diagnostic feedback
BENEFITS: Flexible power scaling with discrete MOSFETs, small weight, cost efficient

Rutronik does not take any responsibility for correctness, functionality or availability of mentioned components. Expect errors & omissions.


Integrated Gate Drivers / Motor Controllers


Manufacturer	Series/Type	MCU	LDO	WDG	Topologie	Gate Drivers	Output Transistors	Current Meas	Description	Boardnet
Infineon	TLE987x	Cortex M3	yes	yes	3-phase	3 HS, 3 LS	external N-channel	1 Shunt	embedded Power IC, MCU, LDO, LIN-transceiver, gate drivers	12 V
Micronas	HVC4223F	Cortex M3	yes	yes	3-phase +	12	integrated	1 Shunt	integrated BLDC/stepper motor control IC, MCU, LDO, LIN-transceiver, gate drivers, power MOSFETs, for up to 10 W	12 V
Melexis	MLX812xx	MLX16-FX	yes	yes	3-phase	6	external N-channel		Sensorless BLDC motor controller, MCU, LDO, LIN-transceiver, gate drivers	12 V
Melexis	MLX8131x						integrated			
Bosch	CY260	no	no	no	3-phase	6	integrated	1 Shunt	ISO 26262, monolithic B6 bridge, gate drivers, power MOSFETs, for up to 60 W	12 V
ST	L9907	no	no	no	3-phase	6	external N-channel	2 Shunt	ISO 26262, FET driver for 3-phase BLDC motor, current sense amplifier	12 V ... 48 V
Toshiba	TB9081	no			3-phase	6+5	external N-channel	3 Shunt	ISO 26262, 3-phase and fail-safe relay pre-driver, current sense amplifier	12 V ... 48 V
Infineon	TLE9180	no			3-phase	11	external N-channel		ISO 26262, FET driver for 3-phase BLDC motor, current sense amplifier	12 V ... 48 V
Infineon	BTN8962/82	no	no	no	half bridge	1 HS, 1 LS	integrated		Half bridge, for DC-motor drive	12 V
Infineon	AURIRS20302S	no	no	no	3-phase	3 HS, 3 LS	external N-channel	1 Shunt	Truck, HVAC	24 V ... 150 V
Infineon	TLE718x	no	no	no	3-phase	3 HS, 3 LS	external N-channel			12 V
ST	L99ASC03	no	yes	yes	3-phase	3 HS, 3 LS	external N-channel	1 Shunt	Gate driver, LDO, WDG, 1xOpAmp	12 V

Capacitors


Manufacturer	Type	Series	Voltage Range, V	Temp.	Features
Rubycon	electrolytic	TZV	6,3 ... 50	105°C	standard, 200 hrs
Rubycon	electrolytic	TLV	6,3 ... 35	105°C	long life 5000 hrs
Rubycon	electrolytic	RX30	10 ... 400	130°C	high temp, long life up to 4000 hrs
AVX	ceramic	X7R	16 ... 3000	125°C	also as FLEXITERM™, FLEXISAFE™ and ESD-SAFE™
AVX	ceramic	X8R	25 ... 100	150°C	high temp
AVX	ceramic	NP0	25 ... 100	125°C	highly stable voltage and temperature characteristics

Microcontrollers


Manufacturer	Series	Type	Description	Features
Renesas	RL78/F1x	R5F10x	16-Bit MCU	low power, ASIL B support, AUTOSAR possible
Renesas	RH850	R7F70x	32-Bit MCU	low power, scalability, up to ASIL D support
Infineon	AURIX™	SAK-TC2xx	32-Bit MCU	Safety up to ASIL D, multiple cores
ST	STM8	STM8AF	8-Bit MCU	price efficient, ASIL B ready
ST	SPC5	SPC56x, SPC58x	32-Bit MCU	PowerArchitecture™, up to ASIL D support

System Basis Chips


Manufacturer	Series	Type	Description	Features
Infineon	TLE845x		LIN LDO	LIN Transceiver, LDO, 8-Pin Package
Infineon	TLE926		Mid-Range SBC	3 x LDO, CAN-FD, up to 3 LIN, Watchdog, Fail Safe Outputs
Infineon	TLE9271/2/3		DC/DC SBC	LDO, DC/DC buck, CAN-FD, Watchdog, up to 3 LIN
Infineon	TLE9278		Multi CAN Power	CAN-FD (PN), up to 4 LIN, DC/DC boost+buck, WWWDG