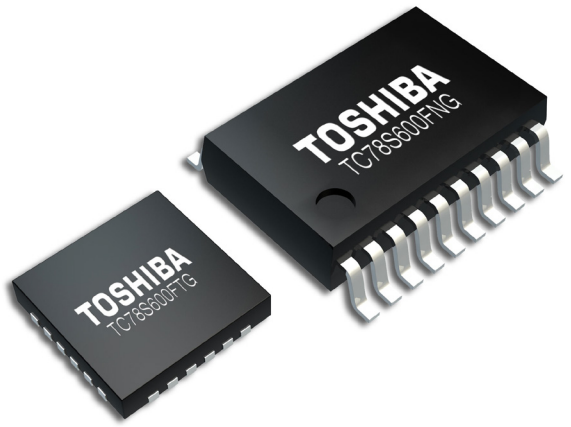
TOSHIBA
Leading Innovation

MOTOR CONTROL

STEPPER MOTOR DRIVERS

With over 35 years of experience, Toshiba offers the industry's widest portfolio of motor driver ICs. Toshiba stepper motor drivers include features to improve system efficiency and safety, while helping to reduce product size and power consumption. Fabricated in Toshiba's 130nm BiCD mixed signal process the motor drivers improve the motor performance while featuring small footprints and attractive prices. Toshiba is leveraging its unique manufacturing and circuit technologies to develop next-generation motor drivers featuring low power consumption, low noise, high speed and high-precision motor control.



APPLICATIONS

- Industrial applications
- Home appliances
- Sewing machines
- Surveillance cameras
- 3D Printers
- CNC machines
- Packaging machines
- Air Conditioners

FEATURES	ADVANTAGES
Pin and package compatible driver types available	Easy replacement with a driver with lower current rating and lower cost
Wide package lineup	Surface mount and through hole packages available. Small package sizes and packages for maximum heat dissipation available
Multiple control interfaces	The user can choose between phase input or clock input driver types
Micro stepping technology	Step modes down to 1/32 step are available
130nm BiCD mixed signal process	Combination of low-voltage control circuitry with high voltage DMOS output drivers provides low Ron and small chipsize
Advanced Dynamic Mixed Decay (ADMD)	Improve efficiency and reduced vibration at high rotation speeds

BENEFITS

Attractive Cost Effects:

- Reduced board space
- Reduced bill of materials cost
- Easy adaption to changed requirements

Increased Motor Performance:

- Low noise and low vibration motor operation
- Reduced current distortion at high-speed
- Improved system reliability and safety
- Reduced heat dissipation
- Improved efficiency

BIPOLAR STEPPER MOTOR DRIVERS

Part Number	Interface			Max. Ratings		Stepping Mode						Single Power Supply	Protection			Temperature Range T_A	Package	Pin, Package & Function compatible device
	Clock	Phase	Serial	Voltage [V]	Current [A]	Full	Half	1/4	1/8	1/16	1/32		UVLO	ISD	TSD			
TB6608FNG	●			15	0.8	●	●	●	●				●		●	-20 to +85°C	SSOP20	
TC78H610FNG		●		18	1.0		●						●	●	●	-20 to +85°C	SSOP16	
TC78S600FTG/FNG	●			18	1.0		●	●	●	●			●	●	●	-20 to +85°C	WQFN24/ SSOP20	
TB67S213FTAG		●		40	2.5	●	●	●				●	●	●	●	-20 to +85°C	WQFN36	TB62261FTAG
TB67S215FTAG	●			40	2.5	●	●	●				●	●	●	●	-20 to +85°C	WQFN36	TB62262FTAG
TB67S269FTG	●			50	2.0	●	●	●	●	●	●	●	●	●	●	-20 to +85°C	WQFN48	TB67S109AFTG, TB62269FTG
TB67S261FTG		●		50	2.0	●	●	●				●	●	●	●	-20 to +85°C	WQFN48	TB67S101AFTG, TB62261FTG, TB62218AFTG, TB62213AFTG
TB67S105FTG			●	50	3.0	●	●					●	●	●	●	-20 to +85°C	WQFN48	TB67S265FTG
TB67S101AFTG/FNG		●		50	4.0	●	●	●				●	●	●	●	-20 to +85°C	WQFN48/ HTSSOP48	TB67S261FTG, TB62261FTG, TB62215AFTG/FNG, TB62214AFTG/FNG
TB67S102AFTG/FNG	●			50	4.0	●	●	●				●	●	●	●	-20 to +85°C	WQFN48/ HTSSOP48	TB67S262FTG, TB62262FTG, TB62213AFTG/FNG, TB62218AFTG/FNG
TB67S103AFTG	●		●	50	4.0	●	●	●	●	●	●	●	●	●	●	-20 to +85°C	WQFN48	
TB67S109AFTG/FNG	●			50	4.0	●	●	●	●	●	●	●	●	●	●	-20 to +85°C	WQFN48/ HTSSOP48	TB67S269FTG, TB62269FTG
TB6600FG/HG	●			50	4.5/5.0	●	●	●	●	●		●	●	●	●	-30 to +85°C	HQFP64/ HZIP25	

UVLO: Undervoltage Lockout
ISD: Overcurrent detection
TSD: Thermal shutdown

UNIPOLAR STEPPER MOTOR DRIVERS

Part Number	Interface			Max. Ratings		Stepping Mode						Single Power Supply	Protection			Temperature Range T_A	Package
	Clock	Phase	Serial	Voltage [V]	Current [A]	Full	Half	1/4	1/8	1/16	1/32		UVLO	ISD	TSD		
TB67S158FTG/NG	●	●	●	80	1.5×2ch	●	●					●	●	●	●	-20 to +85°C	WQFN48/SDIP24
TB67S141FTG/NG/HG		●		84	3.0	●	●	●				●	●	●	●	-20 to +85°C	WQFN48/SDIP24/HZIP25
TB67S142FTG/NG/HG	●			84	3.0	●	●	●				●	●	●	●	-20 to +85°C	WQFN48/SDIP24/HZIP25
TB67S149FTG/FG/HG	●			84	3.0	●	●	●	●	●	●	●	●	●	●	-20 to +85°C	WQFN48/HSOP28/HZIP25

UVLO: Undervoltage Lockout
ISD: Overcurrent detection
TSD: Thermal shutdown