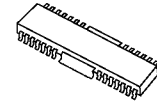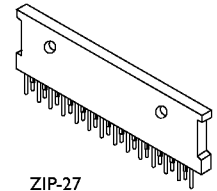# POWER ICs

Stepping Motor Drivers ICs

Outline
The MTD series are monolithic power ICs that can be directly controlled through a CPU or a Gate Array with few external parts.

Applications
1. Stepping motor drive for office equipment products.
2. Stepping motor drive for industrial robots, and automatic equipment.

HSOP-28   ZIP-27

| Type No. | Operation | Absolute Maximum Ratings (Ta=25°C) | | | Characteristics | Outline | |
		V$_{CEO}$ [V]	I$_O$ [A]	P$_T$ [W]		Package	Figure
MTD1110	Unipolar	80	2	5	4-Phase input	ZIP-27	101
1120	Unipolar	80		5	4-Phase input	ZIP-27	101
1120F			1.2	3		HSOP-28	102
★MTD1361	MOSFET	60	1.5	5	Low Loss MOS output	ZIP-27	101
MTD2001		60	1.5	5	Dual H-Bridge	ZIP-27	101
2003		30	1.2	3	Dual H-Bridge	HSOP-28	102
2003F		30	1.2	3	Current levels can be selected in 2 bit digital signal	HSOP-28	102
2005	Bipolar	60	1.3	5	Dual H-Bridge	ZIP-27	101
2005F		60	1.0	3	Selectable slow/fast current decay for microstepping	HSOP-28	102
2006		35	1.3	5	Dual H-Bridge	ZIP-27	101
2006F		35	1	3	Selectable slow/fast current decay for microstepping	HSOP-28	102
2007		50	1.3	5	Dual H-Bridge	ZIP-27	101
2007F		50	1	3	Automatic current decay speed	HSOP-28	102
2009J		35	1.2	2.8	Two Dual H-Bridges for control of two-stepping motors	HSOP-40	106
☆ 2015K		40	1.3	TBD	Two Dual H-Bridges with microstepping control	HSOP-36	TBD

Constant-Current chopping function

★: Under development   ☆: New Product

Power ICs for Interface

Outline
The MTA/MTB series are monolithic power ICs that were developed for use as needle print head drivers in dot matrix printers, and as stepping motor drivers.
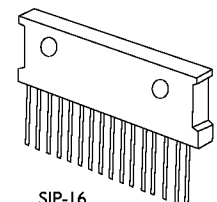
Features
1. The input is TTL and CMOS compatible.
2. Large output Ic=2A or 4A, V$_{CE}$=60V or 80V
3. Insulated type single in-line packaging with heatsink installed

Applications
1. Head driver for dot matrix printers, ECR and time recorders
2. Stepping motor driver for printers, typewriters, FAX, PPC and XY plotters
3. Driver for all types of solenoids and displays (LED, etc.)
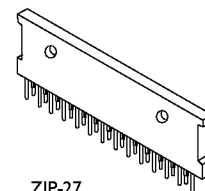
ZIP-27   SIP-16

| Type No. | I$_C$ [A] | V$_{CEO}$ [V] | P$_T$ [W] | | Operation | | | Outline | |
			Ta=25°C	Tc=25°C	Input	Output	Circuits	Package	Figure
MTA001M	2	80	5	35	L Active	NPN Darlington	9	ZIP-27	101
011	2	80	5	35	H Active	NPN Darlington	9	ZIP-27	101
002	2	60	5	35	L Active	PNP Darlington	9	ZIP-27	101
MTB001	4	80	5	35	L Active	NPN Darlington	4	SIP-16	103
011	4	80	5	35	H Active	NPN Darlington	4	SIP-16	103

MTA001M circuit

Shindengen ⊕ America, Inc.

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