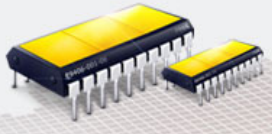

Shenzhen Guanghui

Seller Points:

Business license: reviewed

Business model: dealer

Location: Shenzhen, Guangdong

Corporate website: http://www.liveic.cn

Collect this company

Popularity: 1686418

contact details

Address: 3-10-A, Jincheng Building, Shennan East Road, Shenzhen // Counter: Room Q3B026, Xinhuaqiang Electronic World, Huaqiang North Road, Shenzhen

Contact: Chen Shuhui

Phone: 13686868407

Fax: 0755-82534577

Mobile: 13686868407

QQ:

E-mail: yhcom@live.cn

Product Categories

IC chip (31870)

Integrated Circuit (IC) (5)

> Other IC (5)

Power IC (217)

> LDO (11)
> DC-AC (7)
> DC-DC (30)
> LED Driver IC (20)
> Regulator IC (53)
> Charge Management IC (1)
> Other Power IC (61)

Semiconductor memory (20)

> EPROM (ultraviolet erasable programmable ROM) (3)
> EEPROM (Electrically Erasable and Programmable ROM) (14)
> SDRAM (Synchronous Dynamic Memory) (1)

Your current location: Shenzhen Guanghui Electronics Co., Ltd. > IC products > Motor driver IC

Supply MX1508 SOP-16 four-channel dual brush DC motor driver IC

Supply MX1508 SOP-16 four-channel dual brush DC motor driver IC

product price: ￥3 / 10pcs

factory: LIVEIC

Package: SOP-16

lot number: 13+

Quantity: 8898

Click here

Product consultation line: 13686868407

Product details

MX1508 SOP-16 four-channel dual brush DC motor drive IC
overview
This product provides an integrated brush DC motor drive solution for battery-powered toys, low-voltage or battery-powered motion control applications
case. The circuit integrates a two-channel H-bridge drive circuit designed with N-channel and P-channel power MOSFETs, which is suitable for driving electric toy cars.
Wheel and rear wheel drive, (drives two windings of brushed DC motor or drive stepper motor). The circuit has a wide operating voltage range (from
2V to 9.6V), the maximum continuous output current of the steering wheel reaches 0.8A, and the maximum peak output current reaches 1.5A. Rear wheel drive maximum continuous output
The current reaches 1.5A, and the maximum peak output current reaches 2A.
The drive circuit has a built-in overheat protection circuit. When the load current through the drive circuit is much greater than the maximum continuous current of the circuit, the heat dissipation capacity of the package Limit, the junction temperature of the chip inside the circuit will rise rapidly, and once it exceeds the set value (typical value 150 ℃), the internal circuit will immediately shut down the output
Rate tube, cut off the load current, to avoid the continuous rise in temperature caused by plastic packaging smoke, fire and other hidden safety hazards. Built-in temperature hysteresis circuit, indeed
After the circuit is restored to a safe temperature, the circuit can be controlled again.
.
Features:
a. Low standby current (less than 0.1uA);
b. Low quiescent operating current;
c. Integrated H-bridge drive circuit;
d. Built-in anti-common mode conduction circuit;
e. Power MOSFET with low conduction internal resistance;
f. Built-in overheat protection circuit (TSD) with hysteresis effect;
g. Antistatic level: 3KV (HBM).
Typical applications
a. 2-6 section AA / AAA dry battery powered toy motor drive;
b. 2-6 section nickel-hydrogen / nickel-cadmium rechargeable battery powered toy motor drive;
c. 1-2 section lithium battery powered motor drive

- Flash Memory (Flash / Flash Memory) (2)

Diode (146)

- Rectifier diode (15)
- Zener diode (14)
- Switching diode (10)
- Bridge Stack / Rectifier Bridge / Bridge Rectifier (25)
- Silicon particles / silicon stack / high voltage diode (3)
- Detector diode (1)
- Damping diode (2)
- Varactor Diode (2)
- Fast / ultra-fast / express recovery diode (24)
- Transient (variable) suppression diode (15)
- ESD Electrostatic Diode (6)
- Schottky diode (28)
- PIN diode (1)

Transistor (109)

- SMD / Chip / SMD Transistor (15)
- Power Transistor (24)
- Switching transistor (30)
- Low noise transistor (10)
- UHF / HF Transistor (3)
- Three-terminal regulator (device) (3)
- Composite (Darlington) Transistor (7)
- Audio power tube (8)
- High back pressure transistor (4)
- Band-stop transistor (1)
- Other Transistor (4)

Field Effect Tube (Module)

- MOSFET (156)
- Junction field effect tube (2)
- IGBT module (44)
- Other FET modules (3)

Thyristor / thyristor (58)

- Unidirectional thyristor (thyristor) (9)
- Triac (thyristor) (8)
- Thyristor (thyristor) module (41)

Microcontroller (14)

- Microcontroller Products / Kits (4)
- Microcontroller MCU (10)

Capacitor (132)

- SMD (chip / SMD) capacitor (15)
- Aluminum electrolytic capacitors (9)
- Tantalum electrolytic capacitors (9)

引脚排列

引脚定义

引脚编号	引脚名称	输入/输出	引脚功能描述
1	VCC1	-	1 通道逻辑控制电源端
2	INA1	I	1 通道正转逻辑输入
3	INB1	I	1 通道反转逻辑输入
4	VDD1	-	1 通道功率电源端
5	VCC2	-	2 通道逻辑控制电源端
6	INA2	I	2 通道正转逻辑输入
7	INB2	I	2 通道逻辑输入
8	VDD2	-	2 通道功率电源端
9	OUTB2	O	2 通道反转输出
10	AGND2	-	2 通道逻辑控制电路接地端
11	PGND2	-	2 通道输出功率管接地端
12	OUTA2	O	2 通道正转输出
13	OUTB1	O	1 通道反转输出
14	AGND1	-	1 通道逻辑控制电路接地端
15	PGND1	-	1 通道输出功率管接地端
16	OUTA1	O	1 通道正转输出

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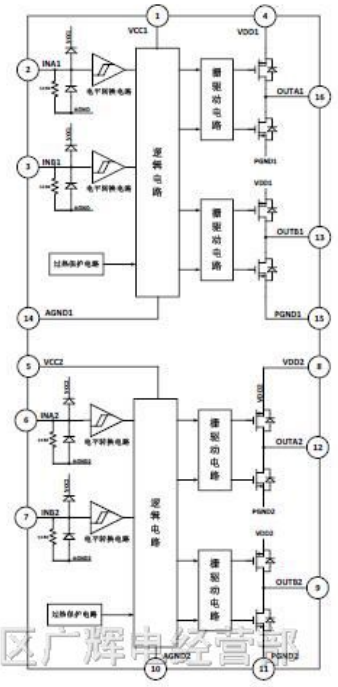
功能框图



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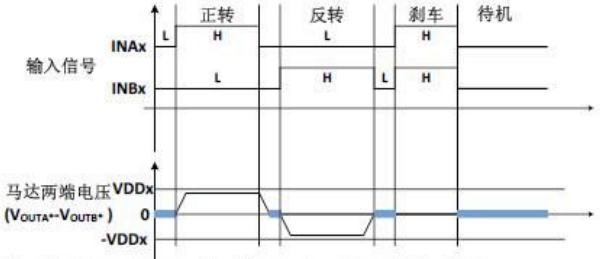
逻辑真值表

INAx	INBx	OUTAx	OUTBx	功能
L	L	Z	Z	待机
H	L	H	L	正转
L	H	L	H	反转
H	H	L	L	刹车

注：x 代表 1 或者 2。

典型波形示意图



注：x 代表 1 或者 2。

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> Safety Capacitor (1)
> Super (Farra / Gold) Capacitor (2)
> Motor (start) capacitor (59)
> Porcelain (ceramic) capacitors (2)
> Ceramic capacitor (5)
> Organic film dielectric capacitor (1)
> Polypropylene (CBB) capacitors (13)
> Paper film composite capacitor (paper dielectric) capacitor (1)
> Self-healing capacitors (4)
> Tripod capacitor (1)
> Oil-immersed capacitors (3)
> Other capacitors (7)

Resistor (67)

> SMD / Chip Resistor (16)
> Carbon film resistors (1)
> Wire wound resistors (2)
> Exclusion / Network resistance (7)
> Thermistor (22)
> Varistor (15)
> Jumper / sampling / milliohm resistance (2)
> Aluminum shell resistance (2)

Inductor (113)

> Chip inductors (1)
> Color Ring / Color Code Inductance (2)
> Hollow coil (3)
> Magnetic bead / magnetic ring (ring type) inductance (2)
> Power inductor (3)
> Choke coil inductance (1)
> Common mode inductance (1)
> Transformer (100)

Potentiometer (75)

> Synthetic carbon membrane potentiometer (21)
> Ceramic potentiometer (1)
> Wirewound Potentiometer (16)
> Single-turn and multi-turn potentiometers (23)
> Precision potentiometer (13)
> Other potentiometers (1)

Power / Voltage Regulator

> Module Power / Power Module (241)
> Switching power supply (8)
> DC power supply (2)
> Power adapter (6)
> LED (PDP, LCD) power supply (1)
> Other types of power supplies (2)

Quartz crystal device (15)

绝对最大额定值(T_A=25℃)

参数		符号	值	单位
最大逻辑控制电源电压		VCCx(MAX)	7	V
最大功率电源电压		VDDx(MAX)	10	
最大外加输出端电压		VOUT(MAX)	VDD	
最大外加输入电压		VIN(MAX)	VCC	
最大峰值输出电流	1 通道	IOUT(PEAK)	2	A
	2 通道		2	
最大功耗		P_D	1.5	W
结到环境热阻	SOP16 封装	θ_{JAD}	80	℃/W
工作温度范围		T_{opr}	-20~+85	℃
结温		T_J	150	℃
储存温度		Tstg	-55~+150	℃
焊接温度		T_{LED}	260℃，10 秒	
ESD(注 3)			3000	V

注：(1)、x 代表 1 或者 2。

(2)、不同环境温度下的最大功耗计算公式为: $P_D=(150℃-T_A)/\theta_{JA}$

T_A 表示电路工作的环境温度，θ_{JA} 为封装的热阻。150℃表示电路的最高工作结温。

(3)、电路功耗的计算方法: $P=I^2xR$

其中 P 为电路功耗，I 为持续输出电流，R 为电路的导通内阻。电路功耗 P 必须小于最大功耗 P_D

(4)、人体模型，100pF 电容通过 1.5KΩ 电阻放电。

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推荐工作条件(T_A=25℃)

参数		符号	最小值	典型值(VDD=6.5V)	最大值	单位
逻辑和控制电源电压		VCCx	1.8	--	5	V
功率电源电压		VDDx	2	--	9.6	V
2 通道不工作	1 通道持续电流	I_{OUT1}		1.35		A
1 通道不工作	2 通道持续电流	I_{OUT2}		1.35		
通道 1 持续输出 0.6A	2 通道持续电流	I_{OUT2}		1.3		
通道 1 持续输出 0.8A	2 通道持续电流	I_{OUT2}		1.2		

注：(1)、x 代表 1 或者 2。

(2)、逻辑控制电源 VCC 与功率电源 VDD 内部完全独立，可分别供电。当逻辑控制电源 VCC 掉电之后，电路将进入待机模式。

(3)、持续输出电流测试条件为：电路贴装在 PCB 上测试，SOP16 封装的测试 PCB 板尺寸为 21mmx19mm。

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- SMD crystal (5)
- Crystal (Normal) (6)
- Watch vibration (crystal) / clock vibration (crystal) (3)
- Acoustic Surface Devices (1)

Surface Acoustic Devices

- Surface Acoustic Filter (26)
- Surface Acoustic Oscillator (1)
- Surface Acoustic Resonator (1)

Connector / Connector (93)

- Rectangular / Heavy Duty Connector (3)
- RF (coaxial) connectors (11)
- PCB connector (5)
- Wire-to-wire connectors (2)
- FFC / FPC / Film Cable Connector (8)
- Computer connector (1)
- Video / Audio Signal Connector (31)
- Mobile phone connector (4)
- Power connector (3)
- Aviation connector (1)
- Deck (6)
- Terminal Block (4)
- IC socket (5)
- Terminal (2)
- Crystal head (1)
- Alligator clip (2)
- Other connectors (4)

Switch (255)

- SMD / Chip Switch (15)
- Tact switch (47)
- Self-locking switch (6)
- Micro Switch (31)
- Membrane / metal shrapnel switch (1)
- Straight key switch (1)
- Boat / Rocker / Wave Switch (3)
- Button / button switch (1)
- Detection switch (2)
- Toggle / Slide Switch (57)
- Push-type power switch (25)
- DIP / DIP switch (3)
- (Mobile phone) Antenna switch (1)
- Reed / Reed Switch (Magnetron) Switch (10)
- Side push switch (1)
- Touch / Sensor Switch (1)
- Hall switch (6)
- Photoelectric switch (8)
- Timer / Time Control Switch (6)
- Remote switch (2)
- Proximity switch (2)
- Air Switch (14)
- Reverse switch (2)
- Liquid level / water level / material level switch (1)
- Limit switch (2)

电特性参数表

(T_A=25℃, VCCx=3V, VDDx =6V 除非另有规定)

参数	符号	条件	最小值	典型值	最大值	单位
电源参数						
VCCx 待机电流	I_{VCCST}	INA=INBx= L;VCCx=7V;	--	0	10	uA
VDDx 待机电流	I_{VDDST}	VDDx=10V;输出悬空	--	0	10	
VCCx 静态电源电流	I_{VCC}	INAx=H OR INBx=H;输出悬空	--	182	--	uA
VDDx 静态电源电流	I_{VDD}	INAx=H OR INBx=H;输出悬空	--	83	--	
输入逻辑电平						
输入高电平	V_{INH}		2	--	--	V
输入低电平	V_{INL}		--	--	0.8	
输入电平迟滞	V_{HYS}			0.6		
输入高电平电流	I_{INH}	V_{INH}=2.5V,VCCx=3V		191		uA
输入下拉电阻	R_{IN}	V_{INH}=3V,VCCx=3V		12		KΩ
功率管导通内阻						
1 通道导通内阻	R_{ON1}	IO=±200mA VDD1=6V TA=25℃		0.49		Ω
		IO=±800mA VDD1=6V TA=25℃		0.53		
2 通道导通内阻	R_{ON2}	IO=±200mA VDD2=6V TA=25℃		0.49		
		IO=±800mA VDD2=6V TA=25℃		0.53		
保护功能参数						
热关断温度点	TSD		--	150	--	℃
热关断温度迟滞	TSDH		--	20	--	
功率 MOSFET 体二极管导通特性-1 通道						
PMOS 体二极管	V_{PD}	I=400mA,VCC1=3V, VDD1=INA1=INB1=0V		0.76		V
NMOS 体二极管	V_{ND}	I=-400mA, VCC1=VDD1=3V, INA1=INB1=0V		0.75		
功率 MOSFET 体二极管导通特性-2 通道						
PMOS 体二极管	V_{PD}	I=400mA,VCC2=3V, VDD2=INA2=INB2=0V		0.76		V
NMOS 体二极管	V_{ND}	I=-400mA, VCC2=VDD2=3V, INA2=INB2=0V		0.75		

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典型应用线路图

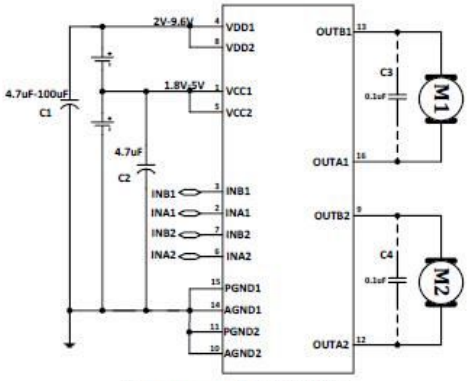

图 1 MX1208 典型应用线路图

特别注意事项：

图 1 中的功率电源 VDD 对地去耦电容(C1)容值应根据具体的应用调整，VDD 电压越高，输出峰值电流越大，C1 取值越大,但是电容 C1 的取值至少需要 4.7uF。在高压、大电流的应用条件下建议电容 C1 取值 100uF。

逻辑电源 VCC 对地电容 C2 必须至少需要 4.7uF，实际应用时不需要靠近芯片单独添加一个电容，可以与其它控制芯片(RX2、MCU)等共用。如果 VCC 对地没有任何电容，当电路因过载进入过热保护模式后，电路可能会进入锁定状态。进入锁定状态后，必须重新改变一次输入信号的状态，电路才能恢复正常。只要 VCC 对地有超过 4.7uF 电容，电路就不会出现锁定状态。

图 1 中驱动电路 OUTAx 与 OUTBx(x=1,2)之间的 0.1uF 电容(C3、C4)是表示接在马达两端的电容，不需要单独添加。

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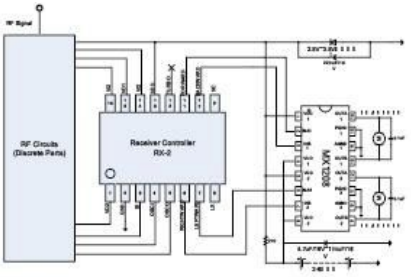

图 2 2-6 节电池供电玩具遥控车马达驱动应用线路图

如图 2 所示的马达驱动应用线路图，其中转向轮驱动电流较小，可选择 MX1208 的 2 通道驱动，后轮马达驱动电流较大，可选择 MX1208 的 1 通道驱动。图 2 中的 VDD1、VDD2 对地去耦电容应根据实际使用情况选择容值。VDD1、VDD2 电压越高，马达电流越大，电容容值越大。电容必须大于 4.7uF。

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- Cam switch (2)
- Knife switch (1)
- Emergency stop switch (1)
- Select switch (1)
- Other engineering equipment switches (2)

Sensor (558)

- Photoelectric / Photosensitive Sensor (1)
- Electromagnetic sensor (1)
- Hall sensor (473)
- Current (pressure) sensor (17)
- Piezo sensor (2)
- Temperature (humidity) degree sensor (13)
- Vision / Image Sensor (1)
- Microwave sensor (6)
- Pressure sensor (2)
- Speed sensor (3)
- Gas / Gas / Smoke Sensor (7)
- Level Sensor (1)
- Vibration / Proximity / Displacement Sensor (5)
- Switch Sensor (3)
- Flow sensor (1)
- Wind speed / direction / flow sensor (1)
- Angle / tilt sensor (3)
- Radiation sensor (12)
- Color mark / color sensor (1)
- Flame (alarm) sensor (1)
- Gyroscope (2)

Fuses (50)

- Ceramic tube fuse (14)
- Thermal fuse (12)
- Current fuse (1)
- Blown fuse (22)
- Fuse holder / fuse clip (1)

Ordinary battery / battery /

Transformer (328)

- Rectifier / Power Transformer (279)
- Electronics / Switch / Pulse Transformer (12)
- Network Transformer (1)
- Communication transformer (1)
- Control transformer (2)
- Converter transformer (2)
- Sealed transformer (31)

Transmitter (4)

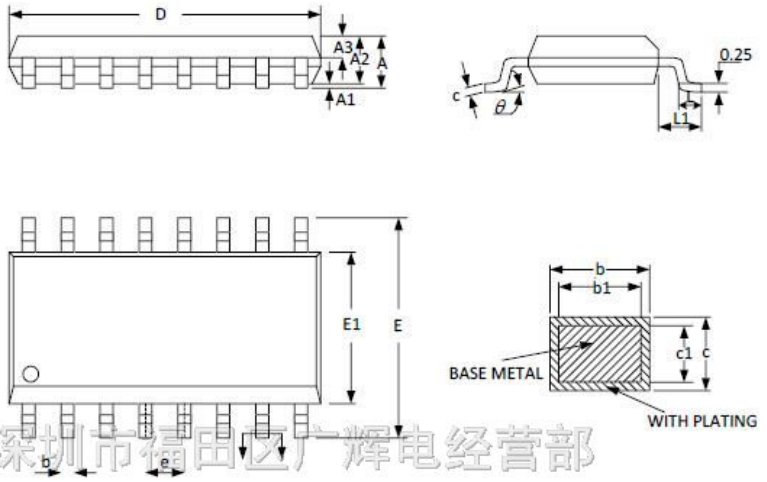
- Voltage Transmitter (3)
- Current Transmitter (1)

Relay (1212)

- Electromagnetic Relay (13)
- 极化继电器(1)
- 功率继电器(405)

封装外形尺寸图

SOP16:



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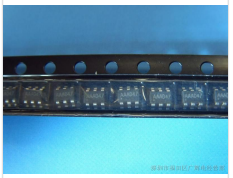
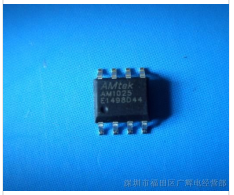
SYMBOL	MILLMETER		
	MIN	NOM	MAX
A	-	-	1.77
A1	0.08	0.18	0.28
A2	1.20	1.40	1.60
A3	0.55	0.65	0.75
b	0.39	-	0.48
b1	0.38	0.41	0.43
c	0.21	-	0.26
c1	0.19	0.20	0.21
D	9.70	9.90	10.10
E	5.80	6.00	6.20
E1	3.70	3.90	4.10
e		1.27BSC	
L	0.5	0.65	0.80
L1		1.05BSC	
θ	0°	-	8°

深圳市福田区广辉电经营部

Related Products

More >>


Supply AM1016 SOT23-6 SM…
$ 1


Supply AM1025 SOP-8 SMD …
$ 1

暂无图片
Supply MX1508 SOP-16 fou…
$ 1

暂无图片
Supply MX2512 DIP-16 fou…
$ 1

暂无图片
Supply MX1515 brushed DC…
$ 1

暂无图片
Supply MX1208 dual brush…
$ 1

暂无图片
Supply MX214B DC motor d…
$ 1

暂无图片
Supply MX612 SOP-8 conti…
$ 1

- 舌簧(磁簧、干簧式)继电器(46)
- 信号继电器(195)
- 时间(延时)继电器(5)
- 中间继电器(10)
- 固态继电器(329)
- 光藕(光电)继电器(4)
- 汽车继电器(123)
- 热继电器(3)
- 通信继电器(52)
- 高频继电器(2)
- 密封继电器(1)
- 过流(欠流、欠相)继电器(7)
- 电力继电器(10)
- 安全继电器(2)
- 仪表式继电器(1)
- 其他继电器(3)

逆变器(3)

- 其它逆变器(3)

放大器(97)

电声元件(32)

- 蜂鸣器（片）/振铃/压电（陶瓷）扬声器(32)

天线(2)

- 手机/移动通信设备天线(2)

光电子/光纤/激光(88)

- 红外线发射管(6)
- 红外线接收头(18)
- 光电光耦合器(光耦)(58)
- 光发射机(1)
- 光纤收发器(1)
- 光纤藕合器(1)
- 激光头(1)
- 其他光电子、激光器件(2)

LED(10)

- LED器件(7)
- LED背光源(1)

PLC/可编程控制器(1)

编码器(1)

- 其他编码器(1)

安防监控器材(3)

- 监控系统(3)

IT/电子产品成套件(1)

- 无线收发器（模块）(1)

电子测量仪器(4)

- 其它电子测量仪器(4)

电子产品制造设备(1)

- 其他设备(1)

仪器/仪表(67)
> 温度仪表(62)
> 控制（调节）仪表(1)
> 电子衡器(3)
> 其他未分类(1)
Hardware / Tools (5)
Other unclassified (506)
switch
Motor driver IC
sensor
Power module
Relay
capacitance
Links
Shenzhen Guanghui Electronics Co., Ltd.

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Technical support: Sixteen years of electronic component procurement platform, IC trading network - Weiku Electronic Market Network Registration time: 2008
Popular IC models: LD1086DTTR RT9702PB VT202 SN74HC04ANSR PDB506 LM218P M6538OFP FSTU6800MTCX BAT54CW-7 AD7572JN-5