4N35 VISHAY DIP-6

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:Features

- Isolation test voltage: 5000Vrms
- Switching time: 10µs
- Collector emitter breakdown voltage (Output): 70V
- Collector current(Output):50mA
- Forward current (Input): 50mA
- Forward voltage (Input) (TYP.): 1.3V@ Tamb=25°C
- Operating temperature: -55 to +100°C

74HC595 Shift Register

- 8-bit serial input
- 8-bit serial or parallel output
- Storage register with 3-state outputs
- Shift register with direct clear
- 100 MHz (typical) shift out frequency
- Specified from -40 ℃ to +85 ℃ and from -40 ℃ to +125 ℃

regulator 7805

regulator 7805

:Features

- Package/Case: TO-220
- Series No.: L7805CV
- Output Voltage (at T=25°C): (Min.) 4.8V, (Typ.) 5V, (Max.) 5.35V
- ,Input voltage: (Min.) 7V (Max.) 25V

- ,Output Current To: 1.5A
- Operating Junction Temperature Range: 0 to 150°C
- Storage Temperature Range: -65 to 150°C

:PROTECTIONS

- THERMAL OVERLOAD PROTECTION
- SHORT CIRCUIT PROTECTION
- OUTPUT TRANSITION SOA PROTECTION

Channel Darlington Driver – ULN2803 8

contains 8 drivers that can sink 500mA from a 50V supply, and has diodes included inside for driving coils. This will let the microcontroller or microcomputer power solenoids, DC motors (in one direction) and unipolar stepper motors.

DK112

The DK112 is specially design for low power switch mode control, it is widely use in small household .electrical appliances

:APPLICATIONS

- Battery charger ·DVD/VCD power supply
- Power AC/DC adapters ·Air conditioner power supply
- STB power supply ·AC/DC LED driver applications
- Electromagnetic oven power supply ·TV/Monitor power supply

Dual H-Bridge Motor Driver for DC or Steppers – 600mA – L293D

The Device is a monolithic integrated high voltage, high current four channel driver designed to accept standard DTL or TTL logic levels and drive inductive loads (such as relays solenoides, DC and stepping

.motors) and switching power transistors

To simplify use as two bridges each pair of channels is equipped with an enable input. A separate supply input is provided for the logic, allowing operation at a lower voltage and internal clamp diodes are .included

.This device is suitable for use in switching applications at frequencies up to 5 kHz

The L293D is assembled in a 16 lead plastic packaage which has 4 center pins connected together and used for heatsinking The L293DD is assembled in a 20 lead surface mount which has 8 center pins .connected together and used for heatsinking

تُستخدم هذه الشريحة بكثرة في قيادة المحركات في مشاريع الروبوتات و في اغلب المشاريع التي تستخدم المحركات ضمن منظومتها

IC base 18 Pin

IC base 18 Pin

:Features

- Package: Dip-18
- Current Handling Capacity (A): 1
- No. of Contact Points: 18
- Operating Temperature Range (°C): -20 to 105
- Pitch: 2.54mm
- Pin Length: ~3mm

LM386

The LM386 is a power amplifier designed for use in low voltage consumer applications. The gain is internally set to 20 to keep external part count low, but the addition of an external resistor and capacitor between pins 1 and 8 will increase the gain to any value from 20 to 200
The inputs are ground referenced while the output automatically biases to one-half the supply voltage. The quiescent power drain is only 24 milliwatts when operating from a 6 volt supply, making the LM386 ideal for battery operation

Features :
Battery operation

Minimum external parts
Wide supply voltage range: 4V–12V or 5V–18V
Low quiescent current drain: 4mA
Voltage gains from 20 to 200
Ground referenced input
Self-centering output quiescent voltage
(Low distortion: 0.2% (AV=20, VS=6V, RL=8W, PO=125mW, f=1kHz
Available in 8 pin MSOP package

Applications :
AM-FM radio amplifiers
Portable tape player amplifiers
Intercoms
TV sound systems
Line drivers
Ultrasonic drivers
Small servo drivers
Power converters

Datasheet

الدائة المتكاملة LM386 وهى مكبر صوت منخفض الجهد
المواصفات:
مصدر الجهد : 15 فولت
مصدر الطاقة : 0.25 وات
قيمة الكسب : 20 ـ200
المواد المصنعة : بلاستيك
اللون : اسود

MAX 7219CNG

When you need some help driving a lot of LEDs, the MAX7219 is the best friend you could hope for. Many of us know that if you want to control a lot of LEDs, you'll want to use multiplexing, a technique that lets you control 64 LEDs (say) with only 16 pins (8×8). The annoying thing about 'plexing is that you need to use 8 power transistors (or a power register/latch, that can supply over 100mA per pin) AND you have to constantly refresh the display to keep the image stable. If you need to get something together quickly, or don't want to bother with writing all that code, and especially if you want clean wiring, this chip is the one-stop-solution
The MAX7219 does all the control and refresh work for you in driving either an 8×8 matrix display or 8 x 7-

segment displays (usually these also have a dot so its really an 8-segment display) – 64 LEDs total. All you have to do is send it serial commands via the 4-pin SPI interface and it will auto-magically take care of the rest. Wiring is simplified as well, you only need to set the current level for all LEDs with a single resistor instead of 8 and you can also dim the entire display digitally. It’s a thru-hole chip so you can use it in any breadboard, perfboard or other project, although if you’re soldering it in, we suggest using a socket

Features :
10MHz Serial Interface
Individual LED Segment Control
Decode/No-Decode Digit Selection
)150µA Low-Power Shutdown (Data Retained
Digital and Analog Brightness Control
Display Blanked on Power-Up
Drive Common-Cathode LED Display
24-Pin DIP and SO Packages
Datasheet

شريحة إلكترونية تقوم بالتحكم فى عدد كبير من الـ LED عن طريق توصيلها بالـ SPI يصل إلى 64 LED وهذا كله عن طريق توصلها بـ 4 رجول فقط من المايكروكنترولر

يمكن استخدامها مع 7Segment Driver IC

Microchip MCP3008-I/P 10-Bit ADC with SPI

MCP3008 “8-Channel 10-Bit A/D Converters with SPI Serial Interface”
Suitable to work with Raspberry Pi – to connect any Analog singal to Raspbery Pi
The Microchip Technology Inc. MCP3008 devices are successive approximation 10-bit Analogto-Digital (A/D) converters with on-board sample and hold circuitry. The MCP3008 is programmable to provide four pseudo-differential input pairs or eight single-ended inputs. Differential Nonlinearity (DNL) and Integral Nonlinearity (INL) are specified at ±1 LSB
Communication with the devices is accomplished using a simple serial interface compatible with the SPI protocol. The devices are capable of conversion rates of up to 200 ksps. The MCP3008 devices operate over a broad voltage range (2.7V – 5.5V). Low-current design permits operation with typical standby currents of only 5 nA and typical active currents of 320 µA. The MCP3008 is offered in 16- pin PDIP and SOIC packages

Datasheet

شريحة محول من إشارة تناظرية لإشارة رقمية بدقة 10 بت و 8 قنوات ويتم توصيلها على الميكروكنترولر بإستخدام بروتوكول SPI

Optocoupler PC817

Optocoupler PC817

:Features

- Package: DIP-4
- Model: PC817
- Maximum Forward current (Input): 50mA
- Maximum Reverse voltage (input): 6V
- Maximum Collector Emitter Voltage(Output):80 V
- Maximum Collector Current (Output) : 50 mA
- Total power dissipation: 200mW
- Operating temperature: −30 to +100 C
- Storage temperature: −55 to +125 C

Timer NE555P

Timer NE555P

:Features

- (.Supply voltage: 4.5(MIN.)-16v(Max
- Output Current: ±200mA
- Operating free-air temperature: 0 to 70 °C
- Package : PDIP-8