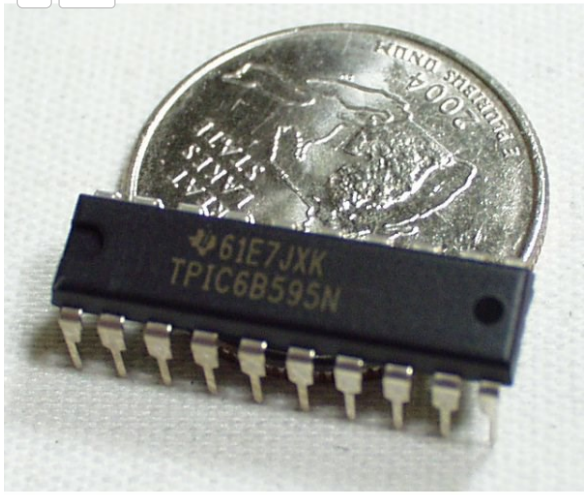

Shift Register 8-Bit High-Power - TPIC6B595

COM-00734 ROHS

DESCRIPTION DOCUMENTS

Simple shift register IC that can control high-voltage/high-current devices directly! Clock in data and latch it to control devices like relays, motors, high-current optical devices, and more! Each channel can sink 150mA continuous, 500mA max.

GET STARTED WITH THE SHIFT REGISTER GUIDE

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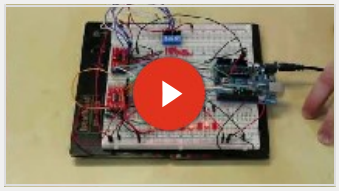
Shift Register 8-Bit High-Power - TPIC6B595 Product Help and Resources

VIDEOS SKILLS NEEDED



Sparkfun Shift Registers
PUBLISHED ON JANUARY 25, 2013

COMMENTS 20 REVIEWS 0

Customer Comments

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Eric-Montreal / about 8 years ago / ★ 6

how about adding the TPIC6A596 that provides the following advantages :
- 350 mA / output (versus 150 mA)
- Full output overload / short circuit protection
- Output mosfet resistance of only 1 Ohm (versus 5 Ohms)
Datasheet :
http://focus.ti.com/lit/ds/symlink/tpic6a596.pdf

N8B / about 8 years ago / ★ 1

Nice IC, we will take it into consideration.

> BrainSlugs83 / about 6 years ago / ★ 9
>
> Guess that suggestion didn't go very far…

singerng / about 6 years ago / ★ 2

how much can this ic source per pin?

> stevenvh17 / about 3 years ago / ★ 1
>
> Datasheet: "Outputs are low-side, open-drain DMOS transistors". Meaning they can't source current, only sink.

> Toni_K / about 6 years ago / ★ 1
>
> Take a look at the data sheet for the current sourcing ratings. It varies depending on the conditions you are running this chip at (continuous drain vs. pulse, multiple outputs vs. single output, etc.).

idtjes3 / about 8 years ago / ★ 2

It would be great if you guys carried a 20 pin DIP socket to go along with these.

bboyho / about 3 years ago / ★ 1

There's a tutorial for shift registers that explains them in genera => https://learn.sparkfun.com/tutorials/shift-registers.

zv470 / about 4 years ago / ★ 1

When driving relays/coils with this chip, would you need to add a flyback diode? Reason I ask is… looking at the datasheet… the output/drain pin schematic shows an integrated diode. Other forums have said you need to add a diode, can anyone confirm it's not needed? Cheers, — Rob

> MrAureliusR / about 2 years ago / ★ 1
>
> It's definitely needed. That integrated diode is what's called a 'body diode' or 'parasitic diode' which cannot handle large currents at all. It's just an effect of the MOS manufacturing process.

Clark R / about 5 years ago / ★ 1

For newbies like myself: a heads up. I've been trying to DAYS stubbornly trying to figure out why I couldn't get these shift registers to work. I had a simple sketch just trying to alternate 8 LED's on/off in sequence. As simple as it should have been, I was getting extremely frustrated at the seemingly random output I was getting. After trying a million different things to try to solve the problem, turned out that the pins didn't fit well enough into my breadboard. The IC was firmly in place and I never would've guessed it, but after checking continuity with a multimeter and holding down on the IC with a pencil, I realized my problem.

Now that I've got it working, great product!

ALok / about 6 years ago / ★ 1

Anyone know if this works with 3.3v logic?

> Toni_K / about 6 years ago / ★ 1
>
> The recommended logic supply voltage is 4.5-5.5v.

Mika Tuupola / about 6 years ago / ★ 1

This is excellent hi power alternative to the usual 74HC595 chips. I wrote a small tutorial on them how to bit bang or drive them SPI.

> stevenvh17 / about 3 years ago / ★ 1
>
> But (for low currents) the HC595 can source or sink, while the TPIC can only sink current.

Hivoltage / about 7 years ago / ★ 1

I have ordered this part and it works well.
I hooked it up to an LCD (Single line) that I bought for .
Then drove it with the USI on the ATTiny85. :)
I was able to send hello the the display.
Note: I wrote it all in assembly.
I am considering on getting more for future projects.
Steve

MrAureliusR / about 2 years ago / ★ 1

You certainly didn't need the high-power version to drive an LCD

Mr.WIndyBottoms / about 7 years ago / ★ 1

Does anyone know where I can find the eagle library part for this. Can't seem to find it in the sparkfun or default libraries. Google has produced anything either.
Thanks

Member #155921 / about 7 years ago / ★ 2

http://www.cadsoft.de/cgi-bin/download.pl?page=/home/cadsoft/html_public/download.htm.en&dir=eagle/userfiles/libraries
search for TPIC and it should come up with a library that has the TPIC6*595 registers. Just made an arduino shield with 3 of them on it.

pp.kettu / about 8 years ago / ★ 1

How about adding STP16C596 to your assortment?

START SOMETHING.

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In 2003, CU student Nate Seidle blew a power supply in his dorm room and, in lieu of a way to order easy replacements, decided to start his own company. Since then, SparkFun has been committed to sustainably helping our world achieve electronics literacy from our headquarters in Boulder, Colorado.

No matter your vision, SparkFun's products and resources are designed to make the world of electronics more accessible. In addition to over 2,000 open source components and widgets, SparkFun offers curriculum, training and online tutorials designed to help demystify the wonderful world of embedded electronics. We're here to help you start something.

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