

Load Switches

Quick Reference Guide



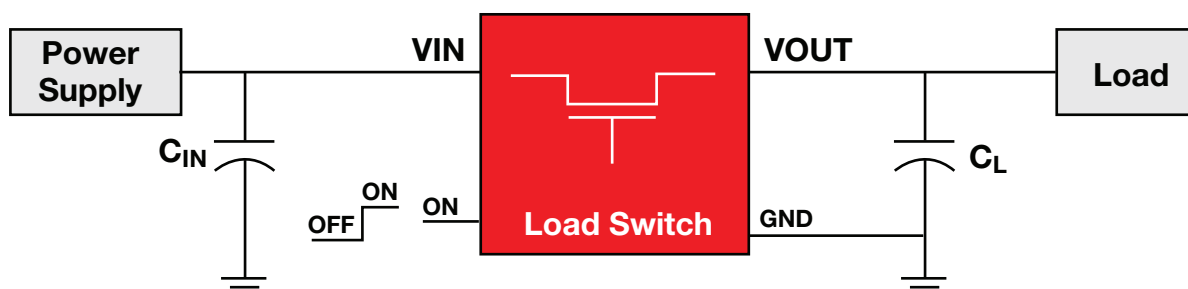
Load switches are a simple, inexpensive way to save and sequence power throughout any space constrained system. The most critical load switch parameters are input voltage range, maximum continuous current, ON-Resistance*, and package size. On this quick reference card you will find TI's most popular load switches which can fit into any kind of application.

Browse the complete load switch portfolio:
www.ti.com/loadswitch

GPN	V _{IN} Min	V _{IN} Max	I _{MAX} (A)	R _{ON} * (mΩ)	Special Features	Size	Package
TPS22965	0.8	5.7	6	16	Adjustable Rise Time, V _{BIAS} Supply, Optional Quick Output Discharge	2 x 2mm	WS0N-8
TPS22954	0.7	5.7	5	14	Power Good, Adj. Rise Time, V _{BIAS} Supply, Optional QOD / Reverse Current Protection	2 x 2mm	WS0N-10
TPS22915	1.05	5.5	2	38	Quick Output Discharge	0.8 x 0.8mm	DSBGA-4
TPS22920	0.75	3.6	4	5.3	Quick Output Discharge Optional Active Low	1.9 x 0.9mm	DSBGA-8
TPS22968	0.8	5.5	4	25	Dual Channel (4A per ch), Adj. Rise Time, Quick Output Discharge, V _{BIAS} Supply	2 x 3mm	WS0N-14
TPS22963C	1.0	5.5	3	13.8	Reverse Current Protection	1.4 x 0.9mm	DSBGA-6
TPS22960	1.62	5.5	0.5	435	Dual Channel (0.5A per ch), Quick Output Discharge	1.5 x 1.5mm 3 x 3mm	uQFN or SOT-23
TPS22929D	1.4	5.5	1.8	115	Quick Output Discharge, Reverse Current Protection	3 x 3mm	SOT-23
TPS22990	0.6	5.5	10	4.4	Power Good, Adjustable Rise Time, Quick Output Discharge	2 x 3mm	WS0N-10

ON-Resistance (R_{ON}) is the resistance across the load switch from V_{IN} to V_{OUT}. R_{ON} is not the same as R_{DS(ON)}, pass FET resistance, which ignores additional resistance from the bond wires & packaging.

Preview devices are listed in **bold teal**.



Design Resources and Support

More Device Information

- ti.com/loadswitch

Application Notes

- SLVA652: [What is a Load Switch?](#)
- SLVUA74: [Load Switch Thermal Considerations](#)
- SLVA670A: [Managing Inrush Current](#)

TI Designs

- TIDA-00194: [Power Regulation & Distribution for Intel SkyLake\(TM\) Processor Platform Reference Design](#)
- TIDA-00513: [Parallel Load Switches for Higher Output Current & Reduced ON-Resistance Reference Design](#)
- TIDA-00399: [SSD Power Delivery Reference Design](#)

E2E

- Load Switches and Power Path Protection: http://e2e.ti.com/support/power_management/switches/

TI Worldwide Technical Support

Internet

TI Semiconductor Product Information Center Home Page
support.ti.com

TI E2E™ Community Home Page
e2e.ti.com

Product Information Centers

Americas	Phone	+1(512) 434-1560
Brazil	Phone	0800-891-2616
Mexico	Phone	0800-670-7544
	Fax	+1(972) 927-6377
	Internet/Email	support.ti.com/sc/pic/americas.htm

Europe, Middle East, and Africa

Phone	
European Free Call	00800-ASK-TEXAS (00800 275 83927)
International	+49 (0) 8161 80 2121
Russian Support	+7 (4) 95 98 10 701
Note: The European Free Call (Toll Free) number is not active in all countries. If you have technical difficulty calling the free call number, please use the international number above.	

Fax	+1(49) (0) 8161 80 2045
Internet	www.ti.com/asktexas
Direct Email	asktexas@ti.com

Japan

Phone	Domestic (toll-free number)	0120-92-3326
Fax	International	+81-3-3344-5317
	Domestic	0120-81-0036
Internet/Email	International	support.ti.com/sc/pic/japan.htm
	Domestic	www.tij.co.jp/pic

Asia

Phone	Toll-Free Number
Note: Toll-free numbers may not support mobile and IP phones.	
Australia	1-800-999-084
China	800-820-8682
Hong Kong	800-96-5941
India	000-800-100-8888
Indonesia	001-803-8861-1006
Korea	080-551-2804
Malaysia	1-800-80-3973
New Zealand	0800-446-934
Philippines	1-800-765-7404
Singapore	800-886-1028
Taiwan	0800-006800
Thailand	001-800-886-0010
International	+86-21-23073444
Fax	+86-21-23073686
Email	tiasia@ti.com or ti-china@ti.com
Internet	support.ti.com/sc/pic/asia.htm

Important Notice: The products and services of Texas Instruments Incorporated and its subsidiaries described herein are sold subject to TI's standard terms and conditions of sale. Customers are advised to obtain the most current and complete information about TI products and services before placing orders. TI assumes no liability for applications assistance, customer's applications or product designs, software performance, or infringement of patents. The publication of information regarding any other company's products or services does not constitute TI's approval, warranty or endorsement thereof.

B012014

The platform bar and E2E are trademarks of Texas Instruments.
All other trademarks are the property of their respective owners.

IMPORTANT NOTICE FOR TI DESIGN INFORMATION AND RESOURCES

Texas Instruments Incorporated ("TI") technical, application or other design advice, services or information, including, but not limited to, reference designs and materials relating to evaluation modules, (collectively, "TI Resources") are intended to assist designers who are developing applications that incorporate TI products; by downloading, accessing or using any particular TI Resource in any way, you (individually or, if you are acting on behalf of a company, your company) agree to use it solely for this purpose and subject to the terms of this Notice.

TI's provision of TI Resources does not expand or otherwise alter TI's applicable published warranties or warranty disclaimers for TI products, and no additional obligations or liabilities arise from TI providing such TI Resources. TI reserves the right to make corrections, enhancements, improvements and other changes to its TI Resources.

You understand and agree that you remain responsible for using your independent analysis, evaluation and judgment in designing your applications and that you have full and exclusive responsibility to assure the safety of your applications and compliance of your applications (and of all TI products used in or for your applications) with all applicable regulations, laws and other applicable requirements. You represent that, with respect to your applications, you have all the necessary expertise to create and implement safeguards that (1) anticipate dangerous consequences of failures, (2) monitor failures and their consequences, and (3) lessen the likelihood of failures that might cause harm and take appropriate actions. You agree that prior to using or distributing any applications that include TI products, you will thoroughly test such applications and the functionality of such TI products as used in such applications. TI has not conducted any testing other than that specifically described in the published documentation for a particular TI Resource.

You are authorized to use, copy and modify any individual TI Resource only in connection with the development of applications that include the TI product(s) identified in such TI Resource. NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER TI INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT OF TI OR ANY THIRD PARTY IS GRANTED HEREIN, including but not limited to any patent right, copyright, mask work right, or other intellectual property right relating to any combination, machine, or process in which TI products or services are used. Information regarding or referencing third-party products or services does not constitute a license to use such products or services, or a warranty or endorsement thereof. Use of TI Resources may require a license from a third party under the patents or other intellectual property of the third party, or a license from TI under the patents or other intellectual property of TI.

TI RESOURCES ARE PROVIDED "AS IS" AND WITH ALL FAULTS. TI DISCLAIMS ALL OTHER WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED, REGARDING TI RESOURCES OR USE THEREOF, INCLUDING BUT NOT LIMITED TO ACCURACY OR COMPLETENESS, TITLE, ANY EPIDEMIC FAILURE WARRANTY AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS.

TI SHALL NOT BE LIABLE FOR AND SHALL NOT DEFEND OR INDEMNIFY YOU AGAINST ANY CLAIM, INCLUDING BUT NOT LIMITED TO ANY INFRINGEMENT CLAIM THAT RELATES TO OR IS BASED ON ANY COMBINATION OF PRODUCTS EVEN IF DESCRIBED IN TI RESOURCES OR OTHERWISE. IN NO EVENT SHALL TI BE LIABLE FOR ANY ACTUAL, DIRECT, SPECIAL, COLLATERAL, INDIRECT, PUNITIVE, INCIDENTAL, CONSEQUENTIAL OR EXEMPLARY DAMAGES IN CONNECTION WITH OR ARISING OUT OF TI RESOURCES OR USE THEREOF, AND REGARDLESS OF WHETHER TI HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

You agree to fully indemnify TI and its representatives against any damages, costs, losses, and/or liabilities arising out of your non-compliance with the terms and provisions of this Notice.

This Notice applies to TI Resources. Additional terms apply to the use and purchase of certain types of materials, TI products and services. These include; without limitation, TI's standard terms for semiconductor products (<http://www.ti.com/sc/docs/stdterms.htm>), [evaluation modules](#), and [samples](http://www.ti.com/sc/docs/sampterm.htm) (<http://www.ti.com/sc/docs/sampterm.htm>).

Mailing Address: Texas Instruments, Post Office Box 655303, Dallas, Texas 75265
Copyright © 2017, Texas Instruments Incorporated