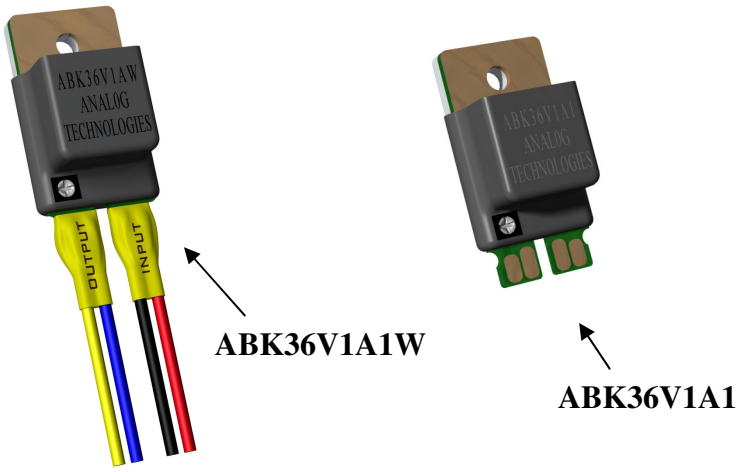
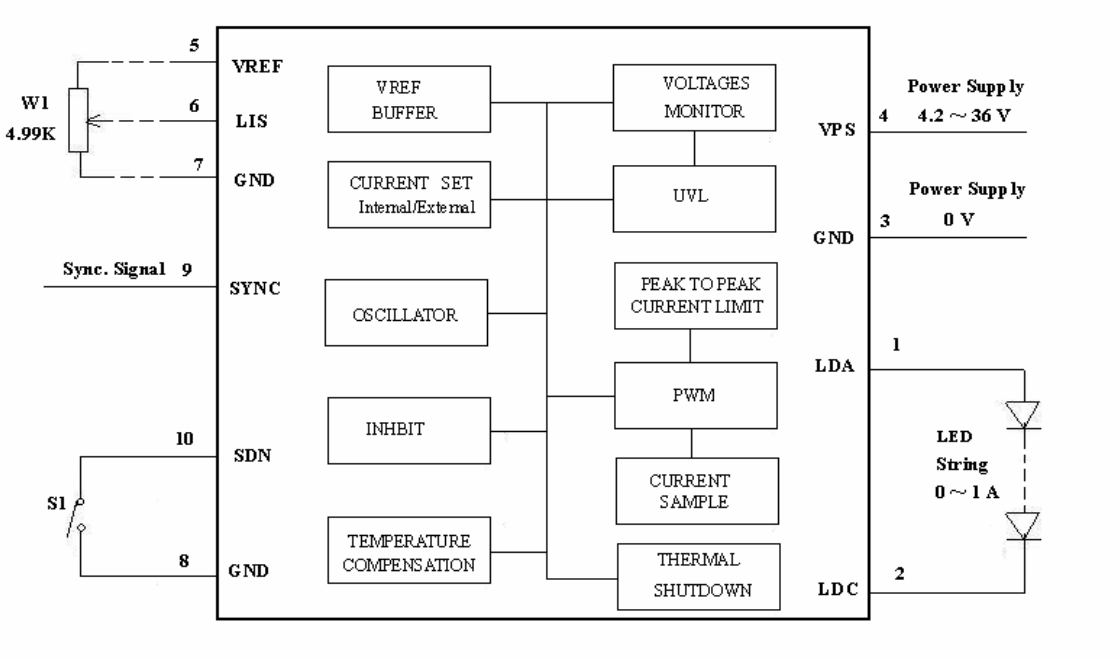
High Efficiency Precision LED Controller

ABK36V1A1

FEATURES

High Efficiency: 90% typical
No Heat Sink Required
High Current without Heat Sink: 1A
High Absolute Accuracy: <0.5%
High Stability: +/– 5mA@1A
High Modulation Speed: 10KHz
Current Adjustable or Fixed Versions
Compact Size





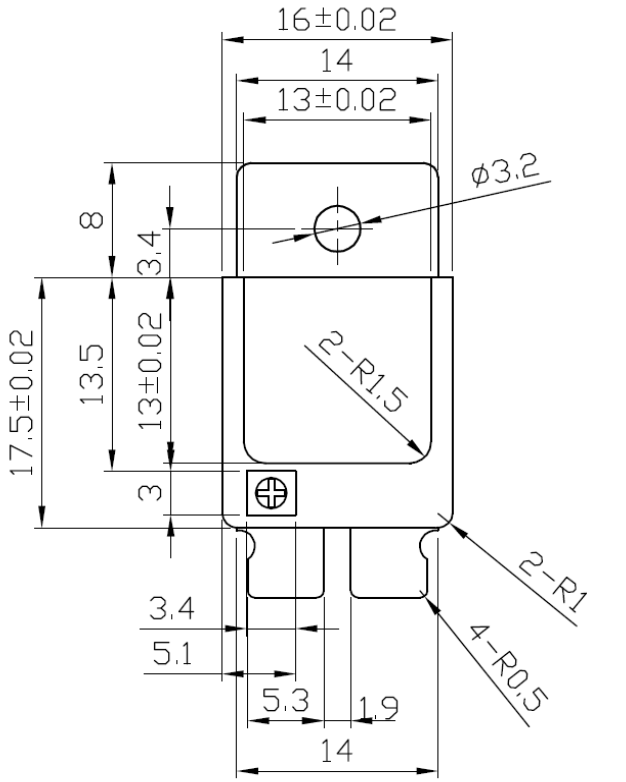
APPLICATIONS

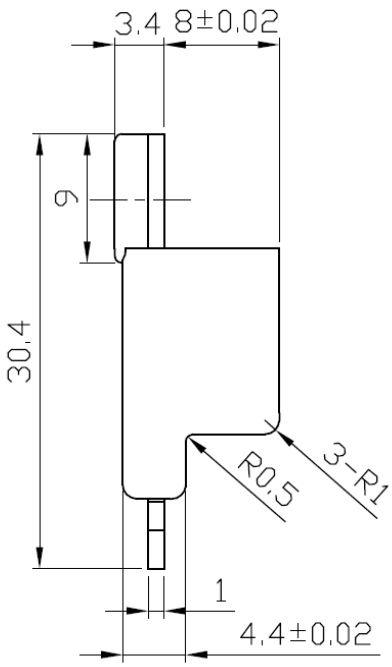
ABK36V1A1 is a high performance low cost LED controller. It features high efficiency, high stability (<+/- 1%) vs. ambient temperature change, small size, current adjustability, etc. It is completely seals, thus, can be used in harsh environment.

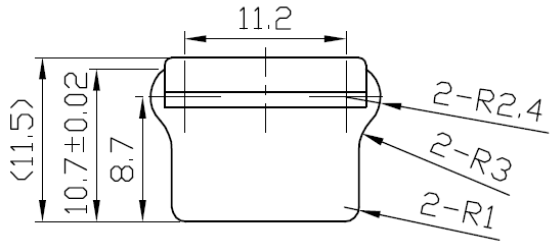
SPECIFICATIONS

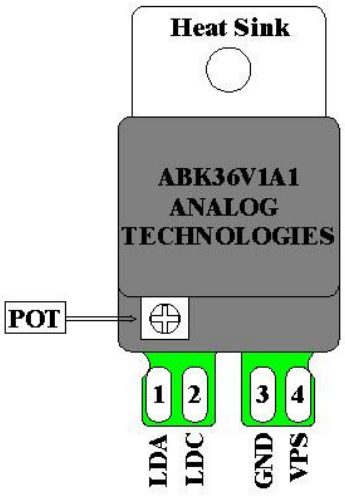
Output current:	0 to 1A
Input voltage:	4.6V to 36V
Output voltage:	2.8V to Vps – 1V
	(Vps is the power supply voltage)
Efficiency:	90% typical (see the curves on page 4 to 17)
Operating temperature:	–40C to 125C
Output short circuit protection:	Yes

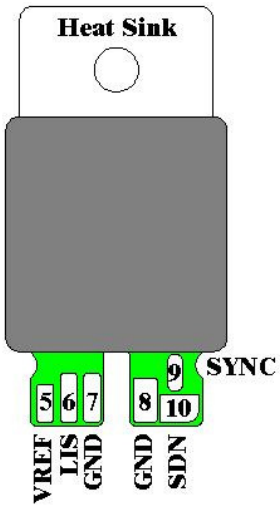
550 E. Weddell Drive, Suite 4, Sunnyvale, CA 94089, U. S. A. Tel.: (408) 747-9760, Fax: (408) 747-9770, Web: www.analogtechnologies.com











ORDERING INFORMATION

Part #	Description
ABK36VFR35A1	Controller of fixed 0.35A output in TO-220 type package without wires
ABK36VFR35A1W	Controller of fixed 0.35A output in TO-220 type package with wires
ABK36VFR7A1	Controller of fixed 0.70A output in TO-220 type package without wires
ABK36VFR7A1W	Controller of fixed 0.70A output in TO-220 type package with wires
ABK36VF1A1	Controller of fixed 1A output in TO-220 type package without wires
ABK36VF1A1W	Controller of fixed 1A output in TO-220 type package with wires
ABK36V1A1	Controller of adjustable 1A output in TO-220 type package without wires
ABK36V1A1W	Controller of adjustable 1A output in TO-220 type package with wires

PRICES

Quantity	1 – 9	10 – 49	50 – 199	200 – 999	≥1000
ABK36V1A1 ABK36VFR35A1 ABK36VF7A1 ABK36VF1A1	$14	$13	$12	$9.8	$8.8
ABK36V1A1W ABK36VFR35A1W ABK36VF7A1 ABK36VF1A1W	$14.5	$13.5	$12.5	$10.2	$9.2

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2. ATI reserves the right to make changes to its products or to discontinue any product or service without notice, and advise customers to obtain the latest version of relevant information to verify, before placing orders, that information being relied on is current and complete.
3. All products are sold subject to the terms and conditions of sale supplied at the time of order acknowledgment, including those pertaining to warranty, patent infringement, and limitation of liability. Testing and other quality control techniques are utilized to the extent ATI deems necessary to support this warranty. Specific testing of all parameters of each device is not necessarily performed, except those mandated by government requirements.
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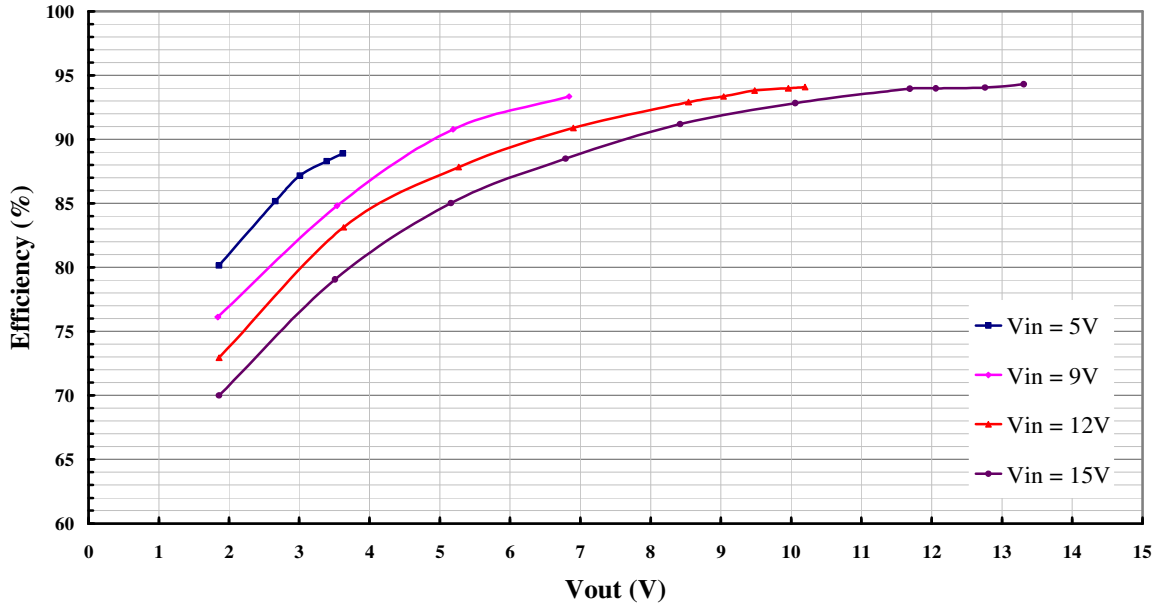

Figure 1. Efficiency vs. Vout, Iout = 350mA and Vin = Constant Values

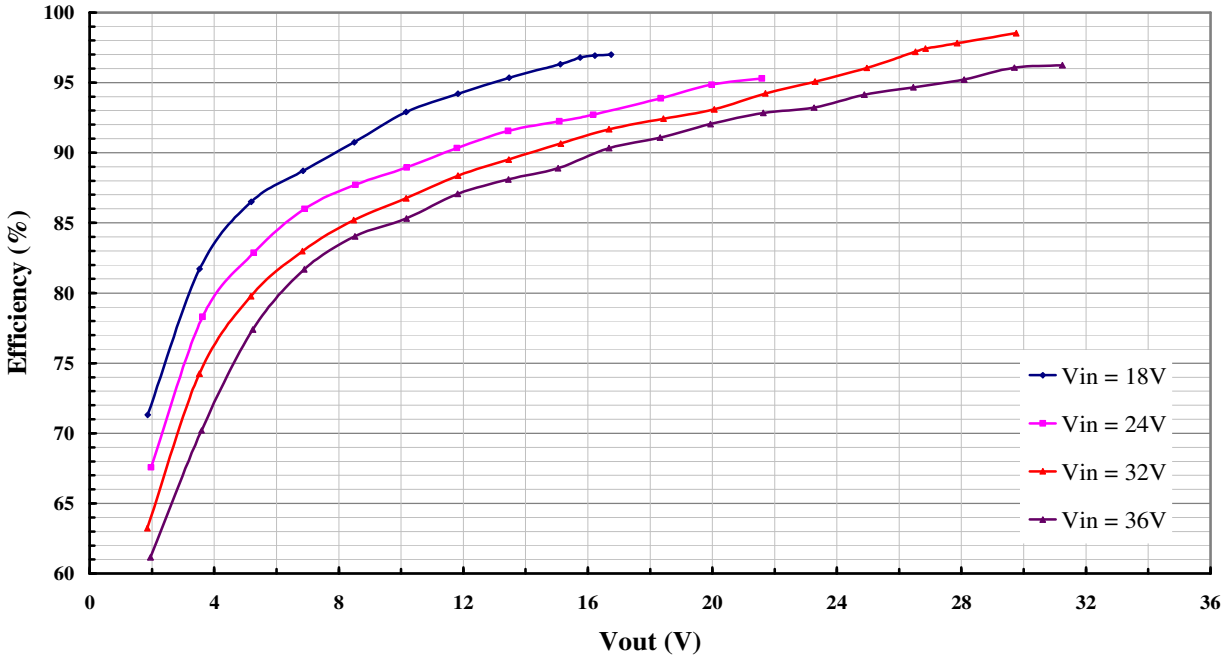

Figure 2. Efficiency vs. Vout, Iout = 350mA and Vin = Constant Values

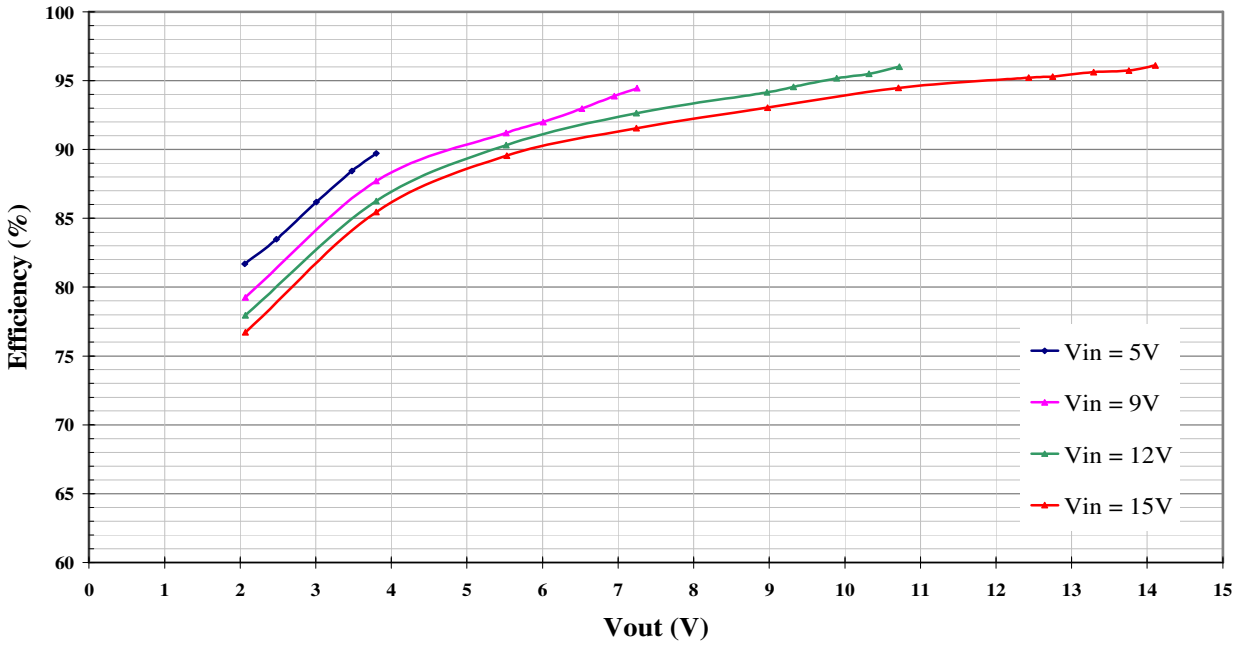

Figure 3. Efficiency vs. Vout, Iout = 700mA and Vin = Constant Values

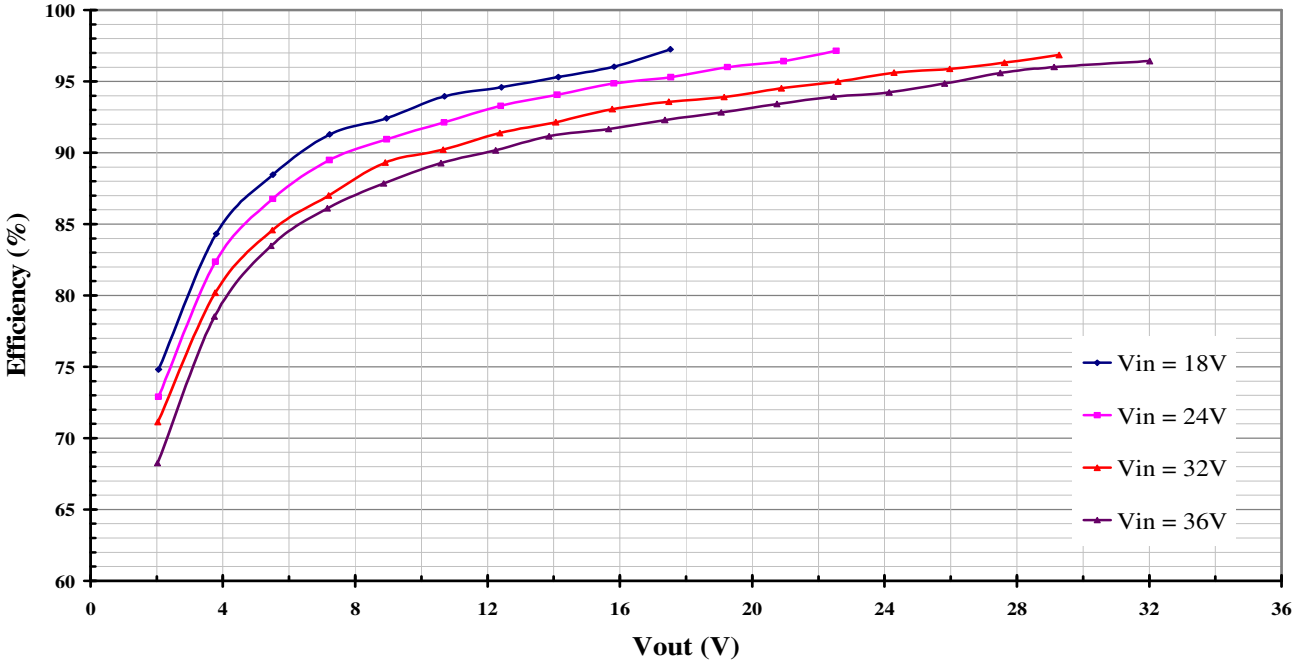

Figure 4. Efficiency vs. Vout, Iout = 700mA and Vin = Constant Values

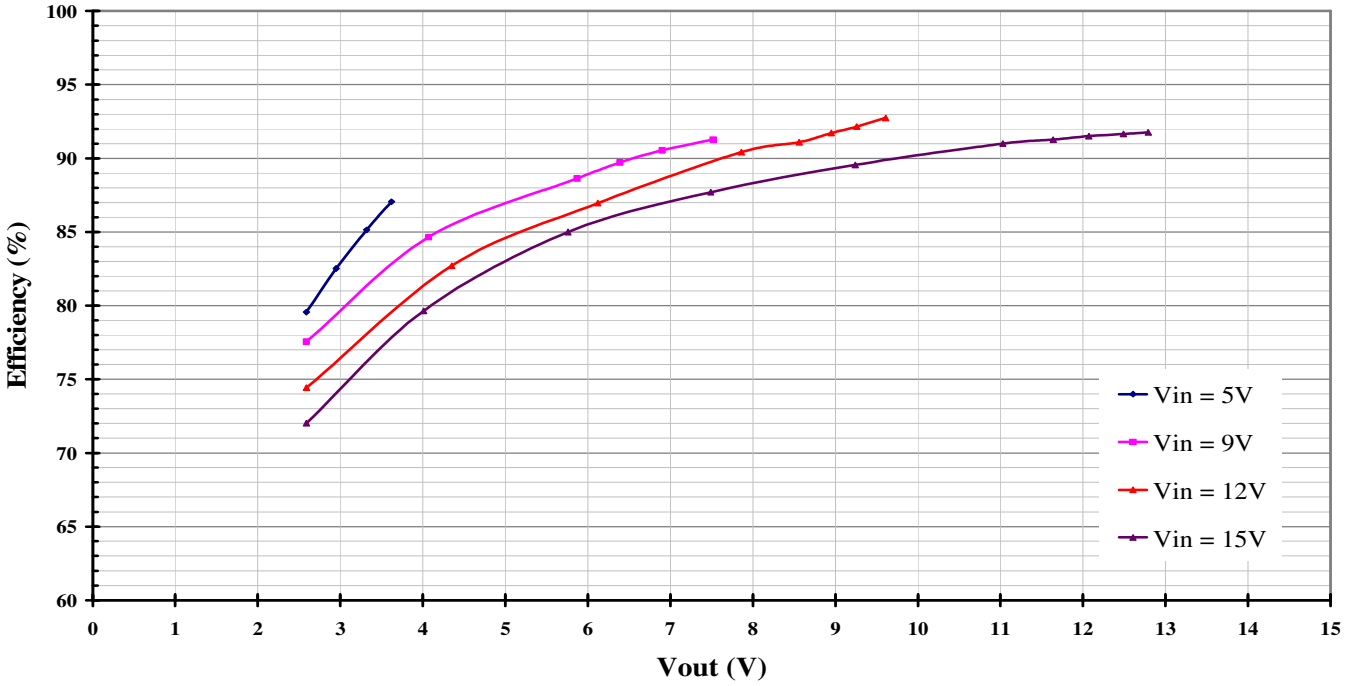

Figure 5. Efficiency vs. Vout, Iout = 1000mA and Vin = Constant Values

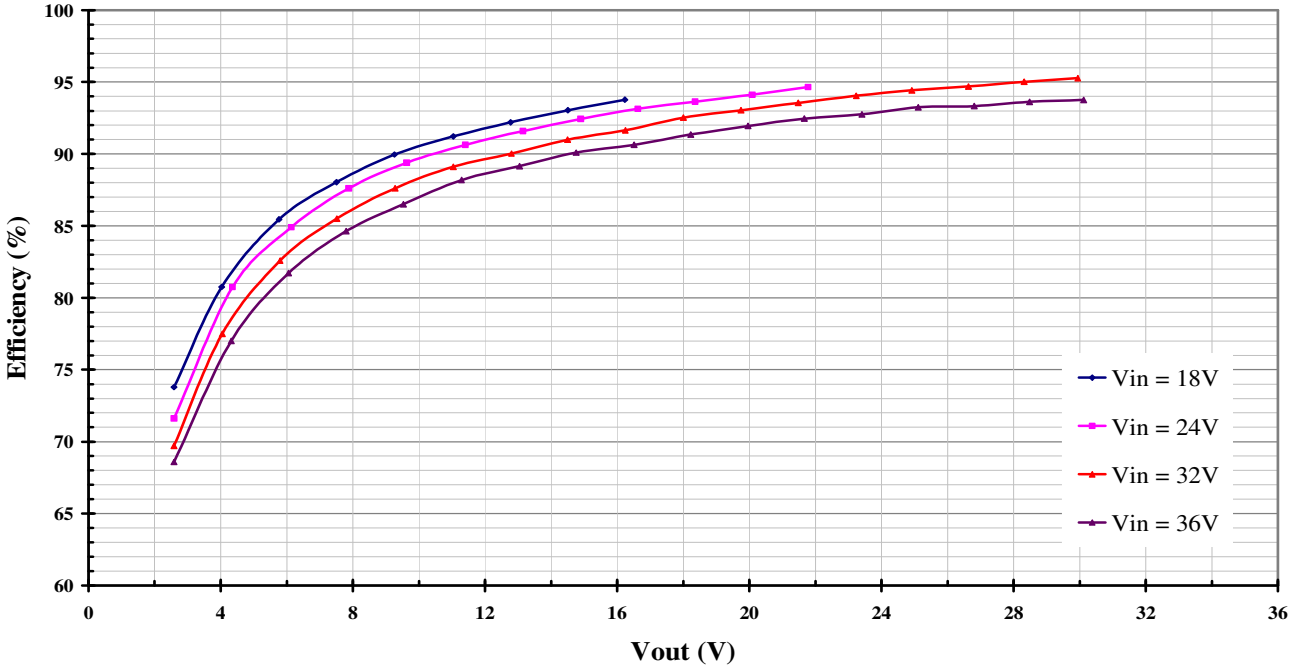

Figure 6. Efficiency vs. Vout, Iout = 1000mA and Vin = Constant Values

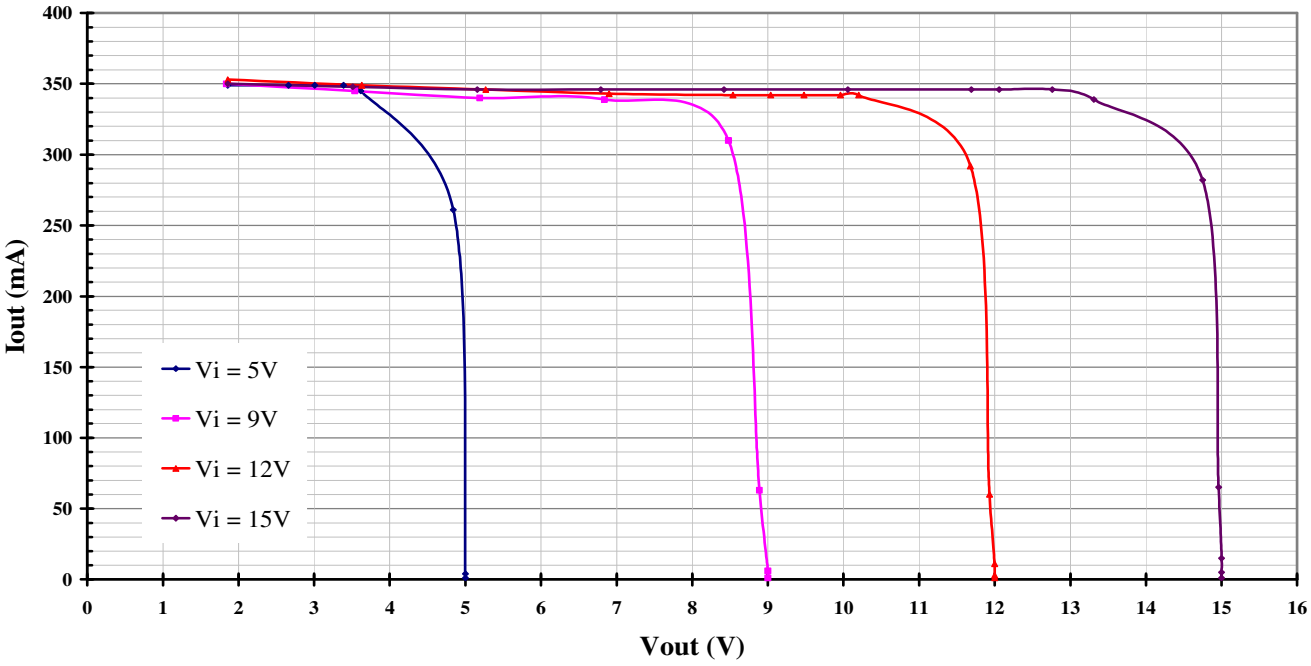

Figure 7. Iout vs. Vout, Iout = 350mA and Vin = Constant Values

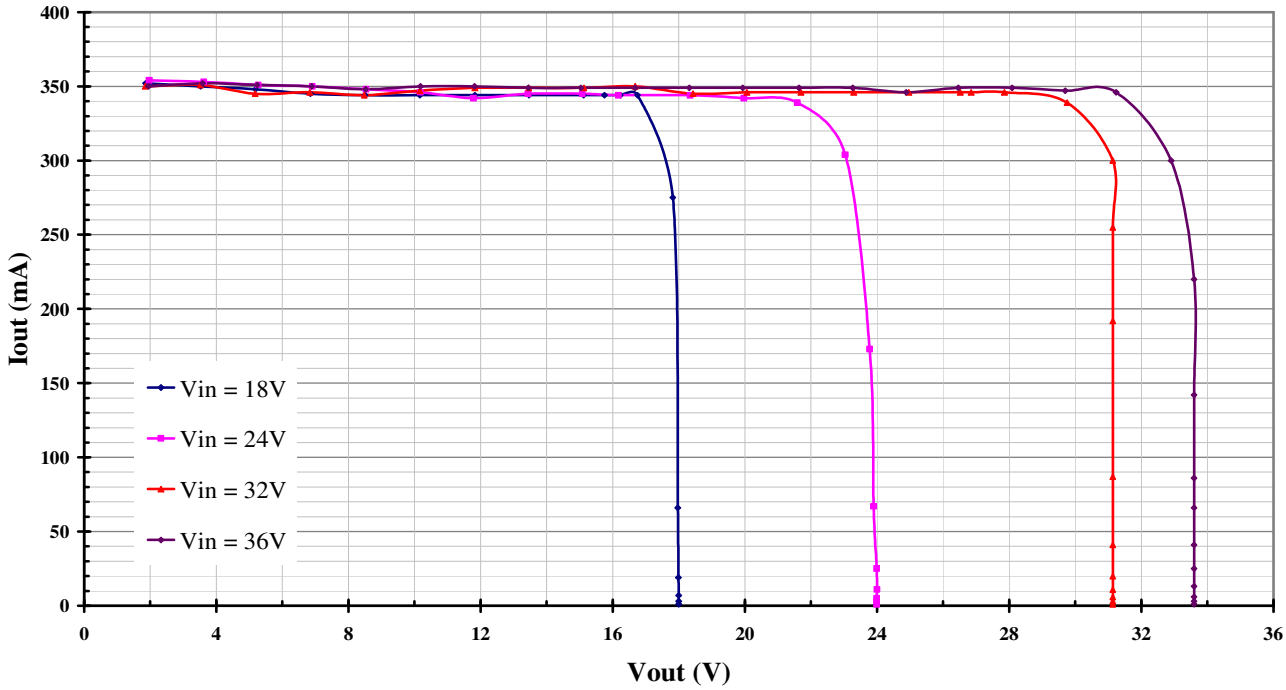

Figure 8. Iout vs. Vout, Iout = 350mA and Vin = Constant Values

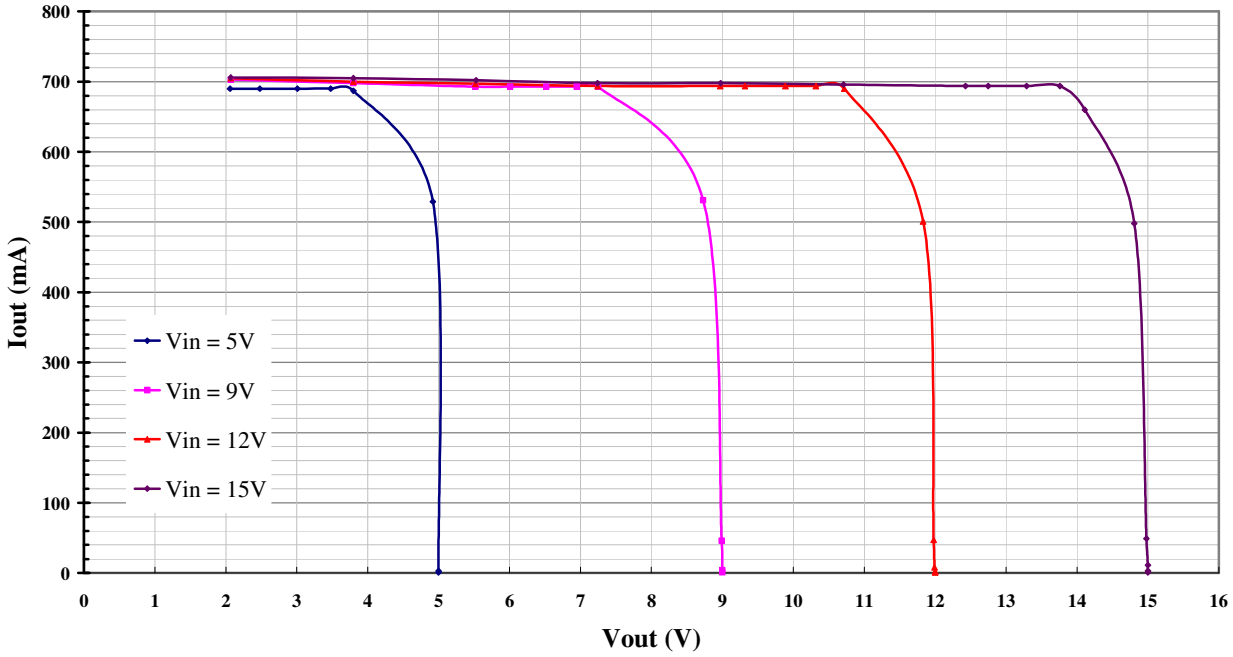

Figure 9. Iout vs. Vout, Iout = 700mA and Vin = Constant Values

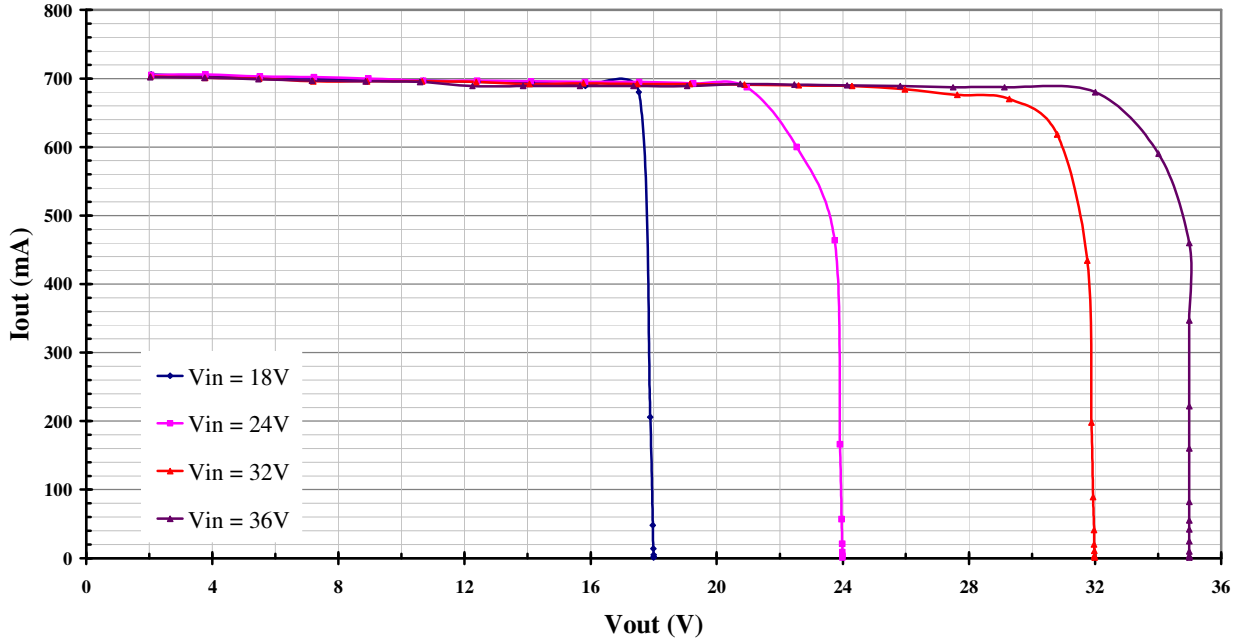

Figure 10 . Iout vs. Vout, Iout = 700mA and Vin = Constant Values

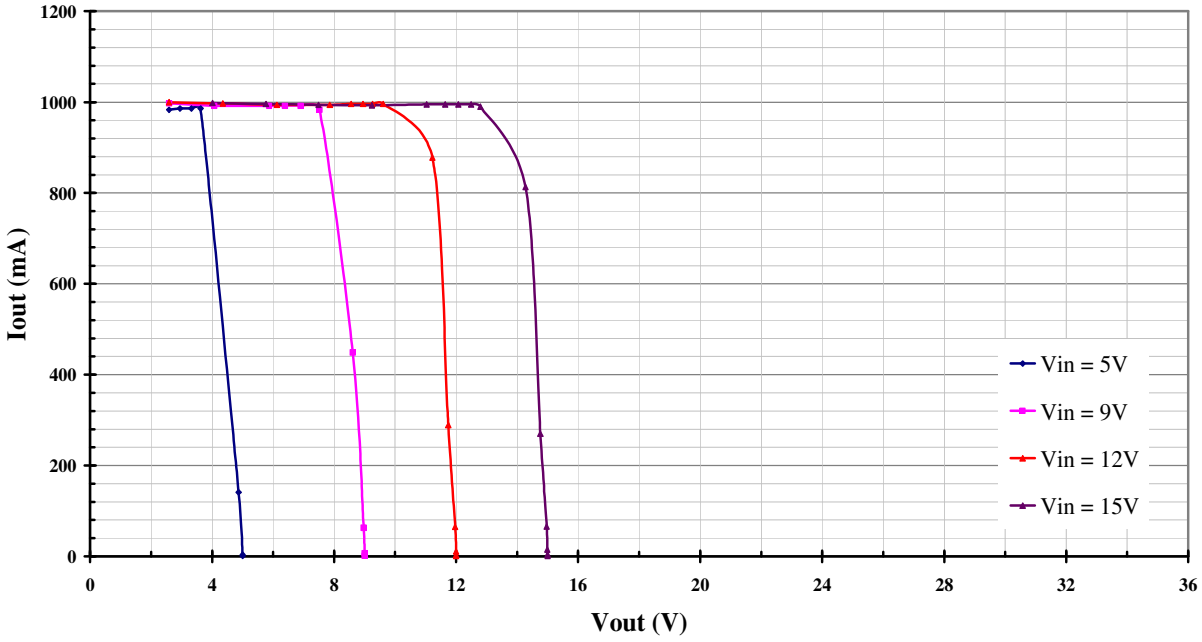

Figure 11 . Iout vs. Vout, Iout = 1000mA and Vin = Constant Values

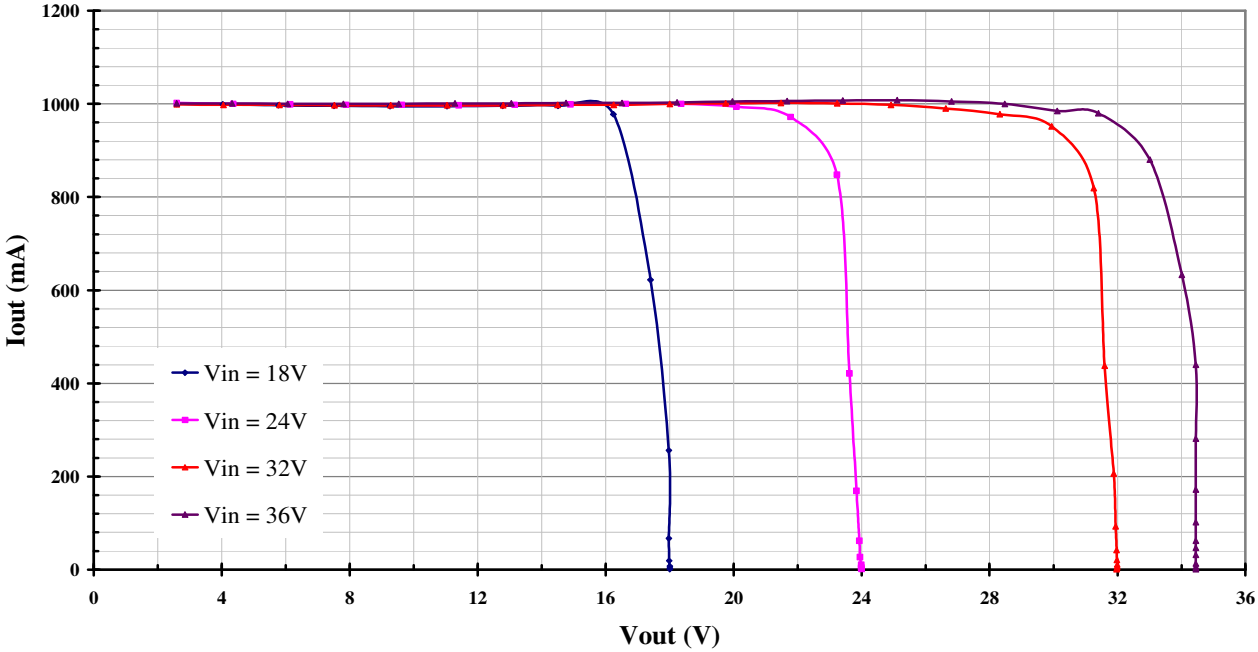

Figure12 . Iout vs. Vout, Iout = 1000mA and Vin = Constant Values

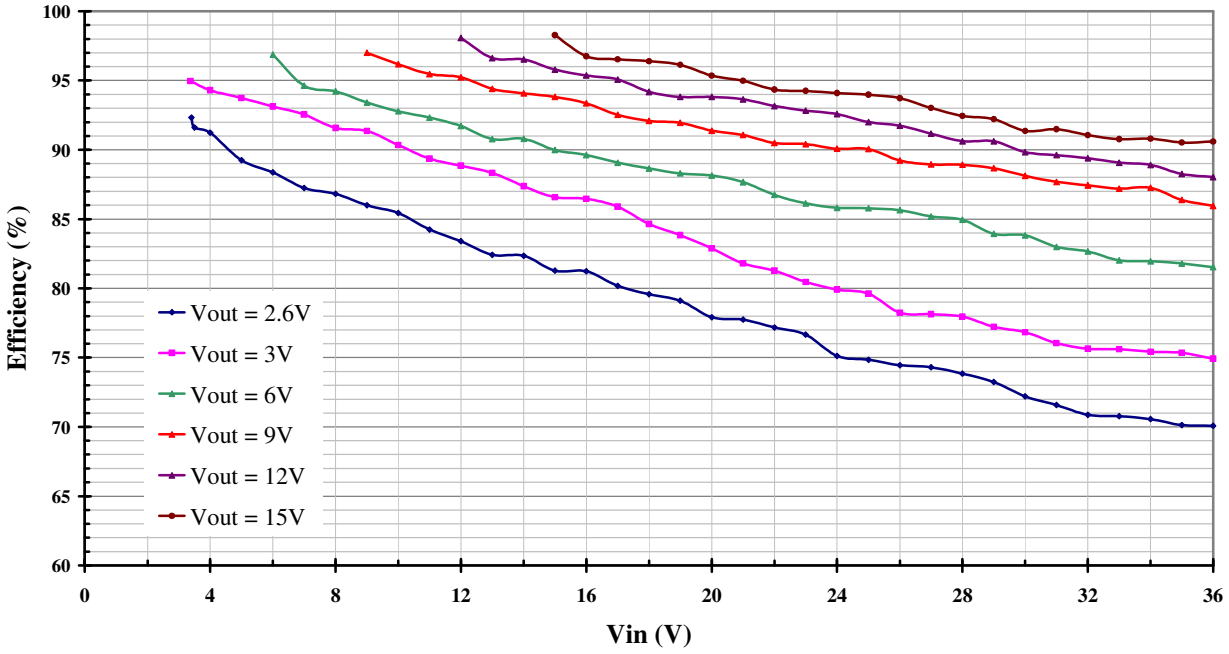

Figure 13. Efficiency vs. Vin, Iout = 350mA and Vout = Constant Values

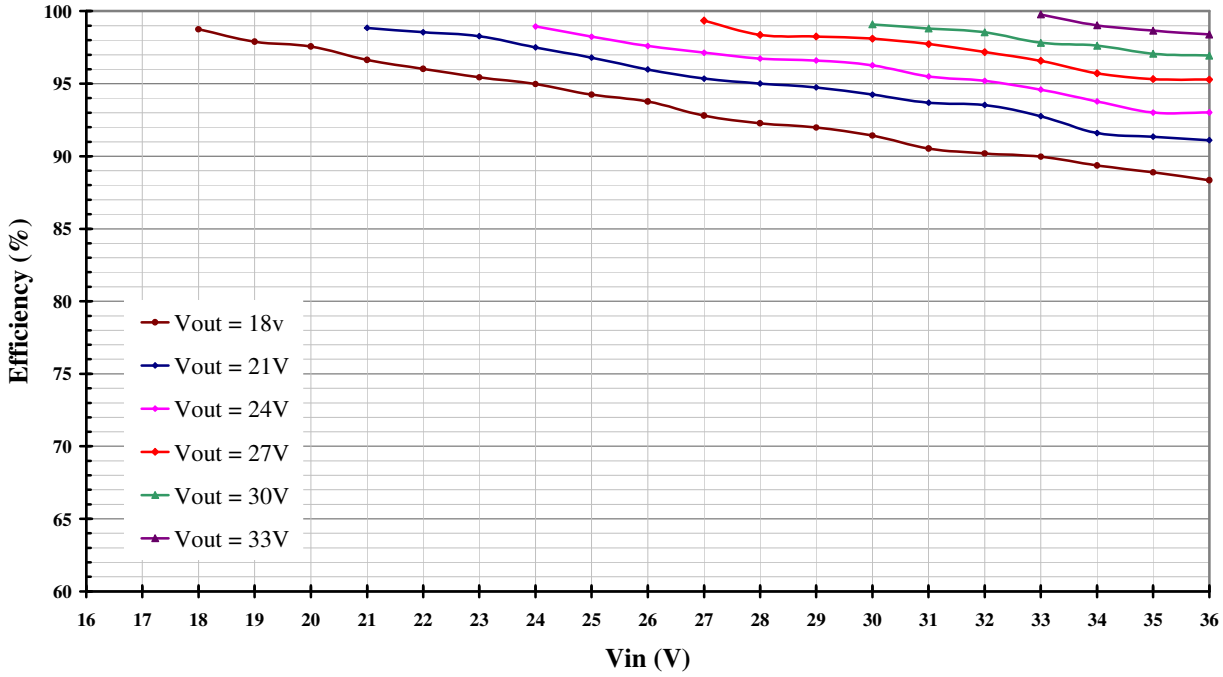

Figure 14. Efficiency vs. Vin, Iout = 350mA and Vout = Constant Values

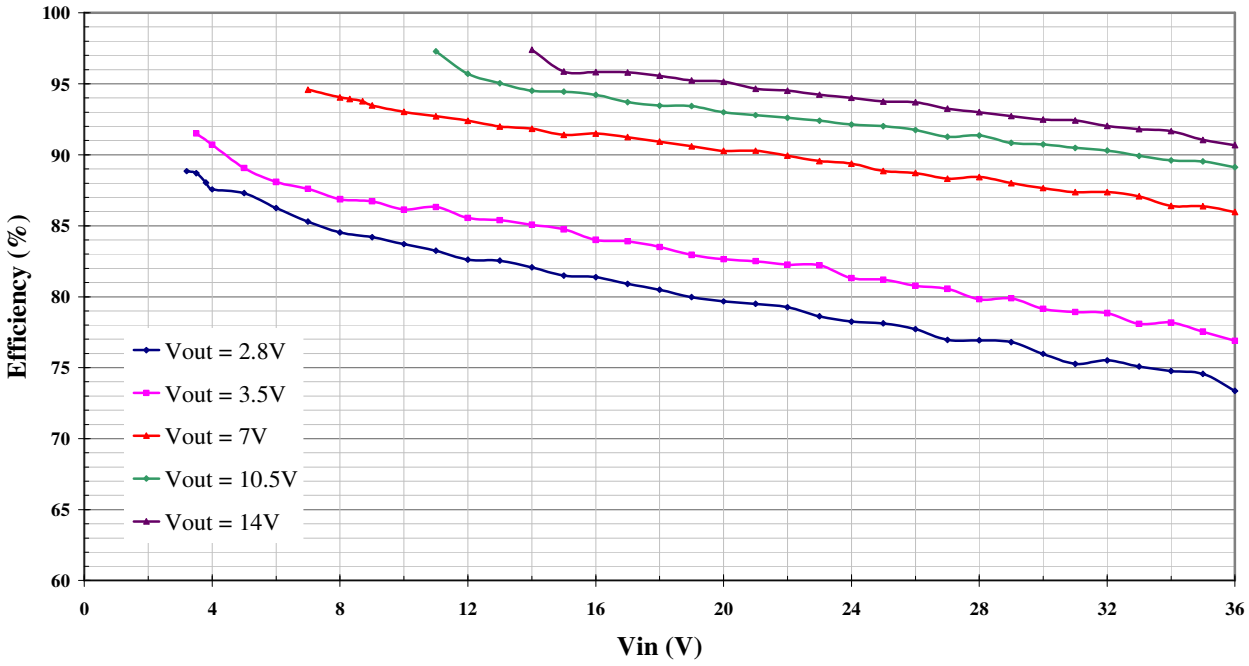

Figure 15. Efficiency vs. Vin, Iout = 700mA and Vout = Constant Values

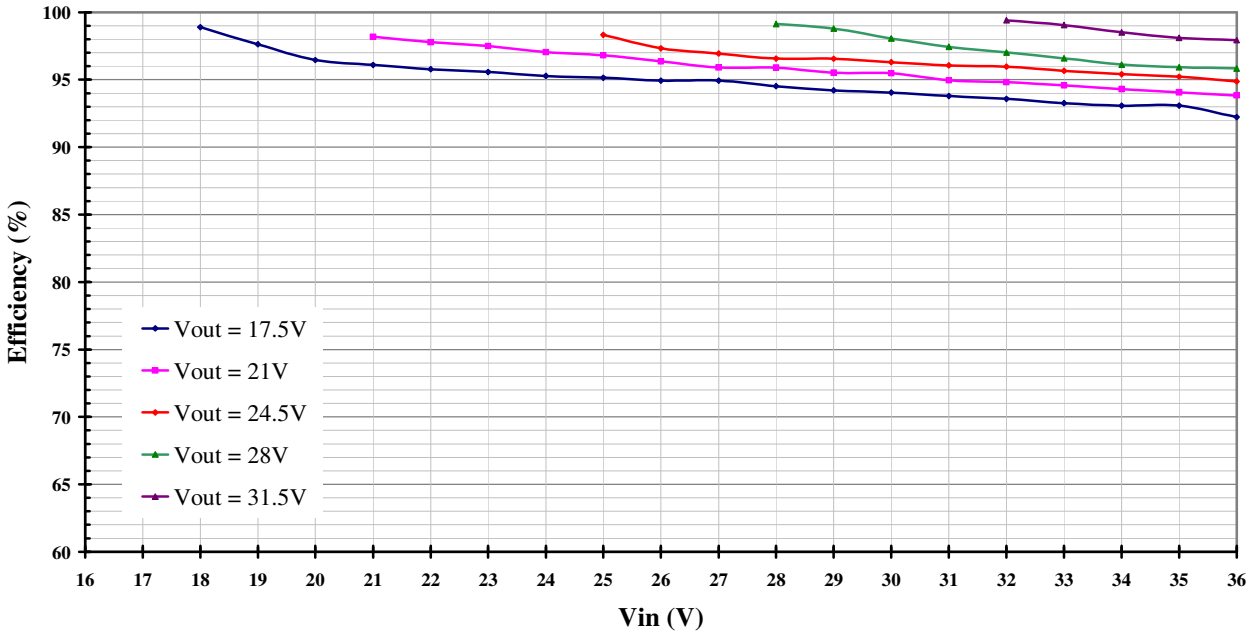

Figure 16. Efficiency vs. Vin, Iout = 700mA and Vout = Constant Values

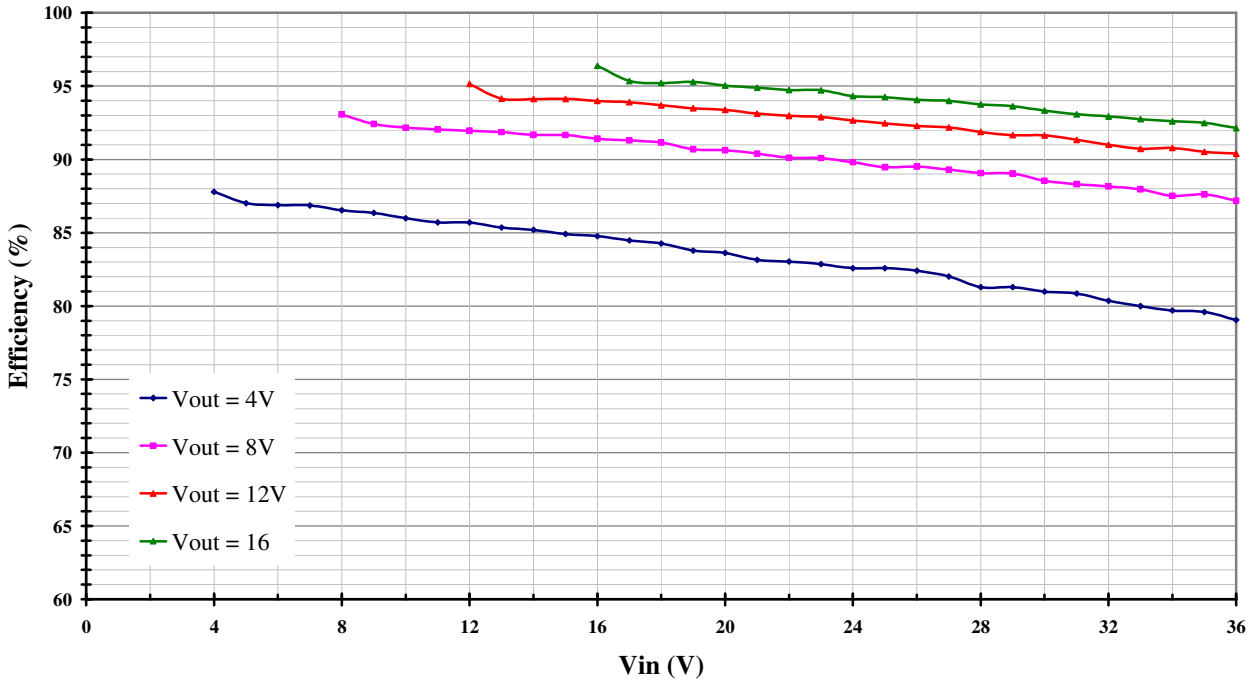

Figure 17. Efficiency vs. Vin, Iout = 1000mA and Vout = Constant Values

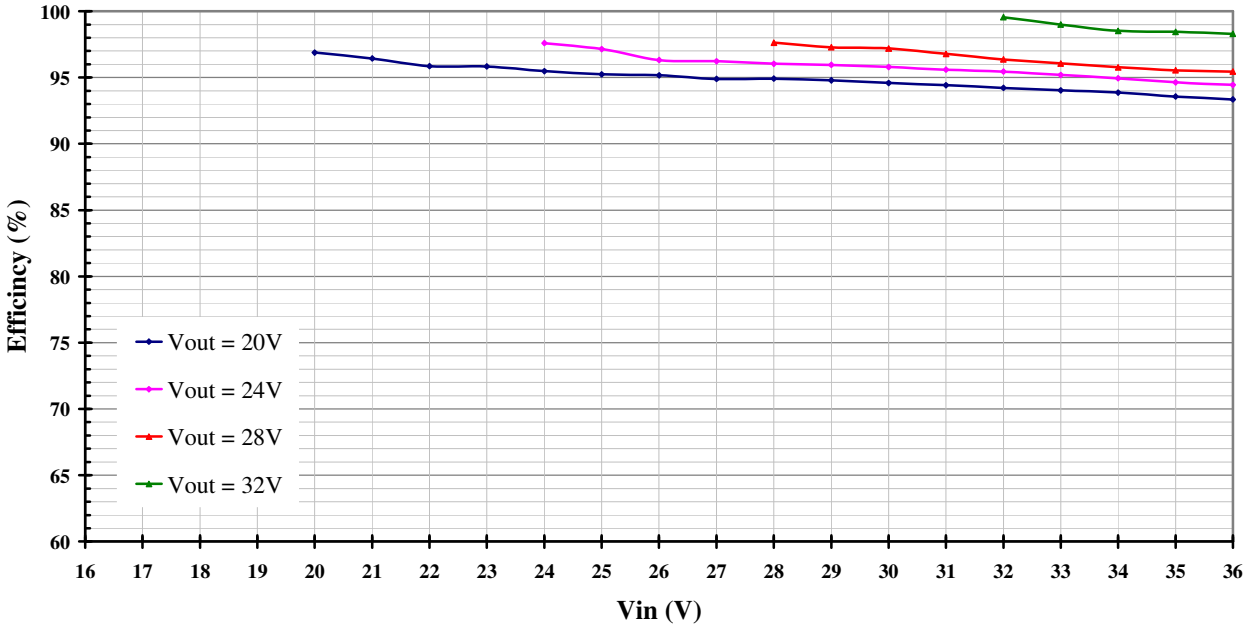

Figure 18. Efficiency vs. Vin, Iout = 1000mA and Vout = Constant Values

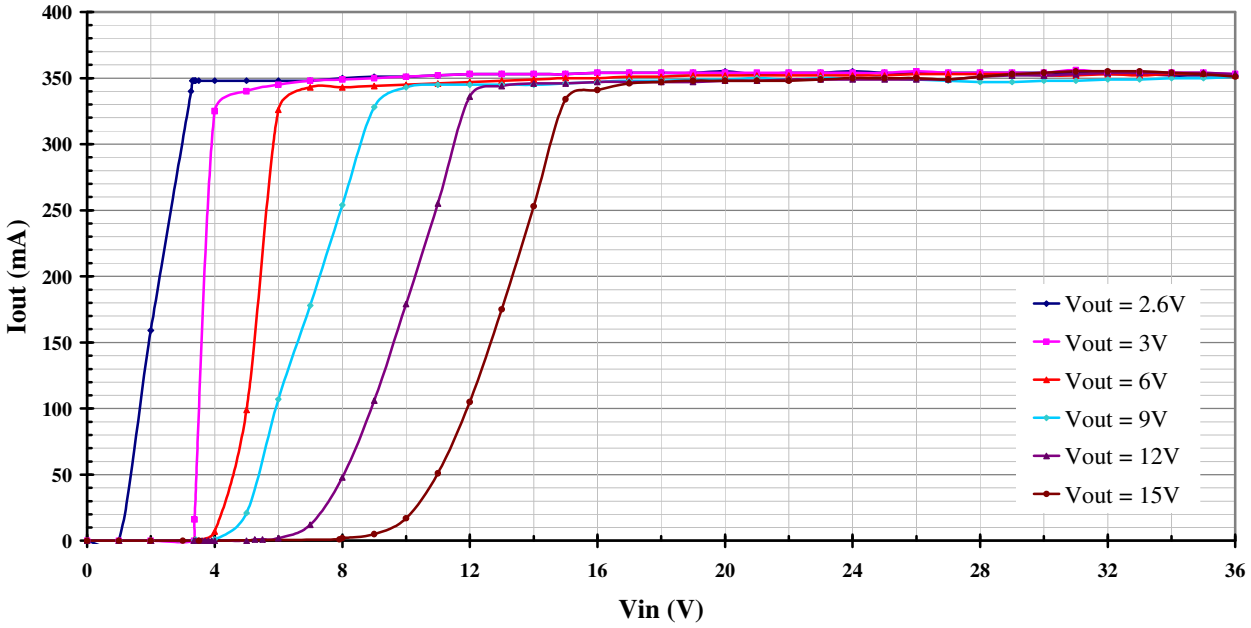

Figure 19. Iout vs. Vin, Iout = 350mA and Vout = Constant Values

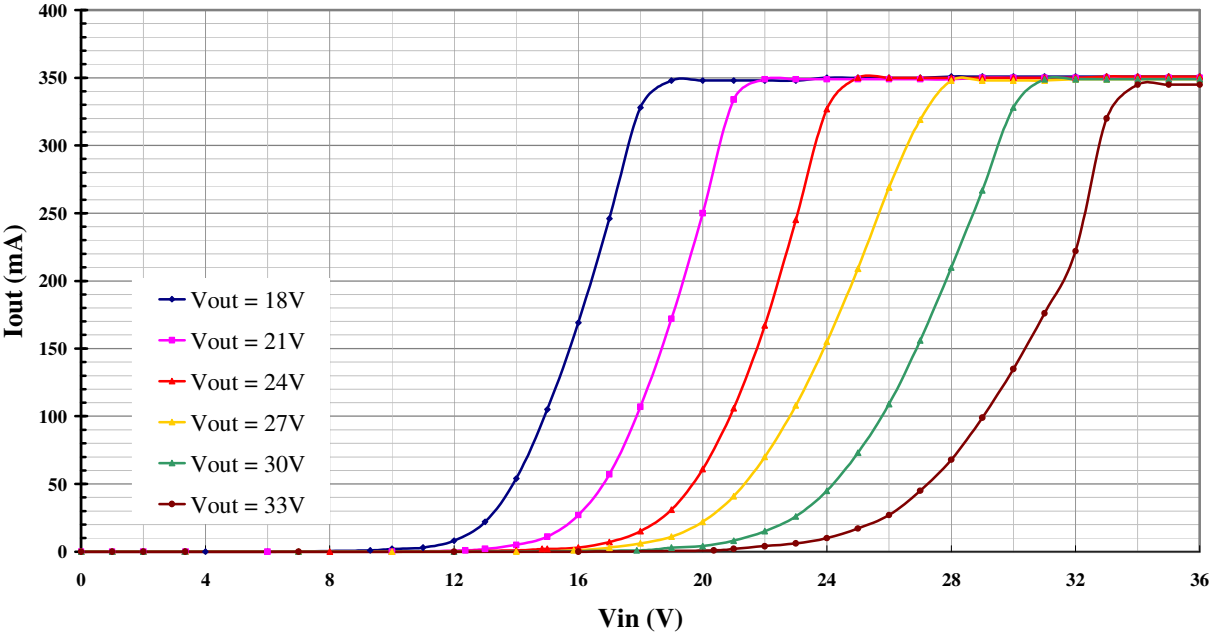

Figure 20. Iout vs. Vin, Iout = 350mA and Vout = Constant Values

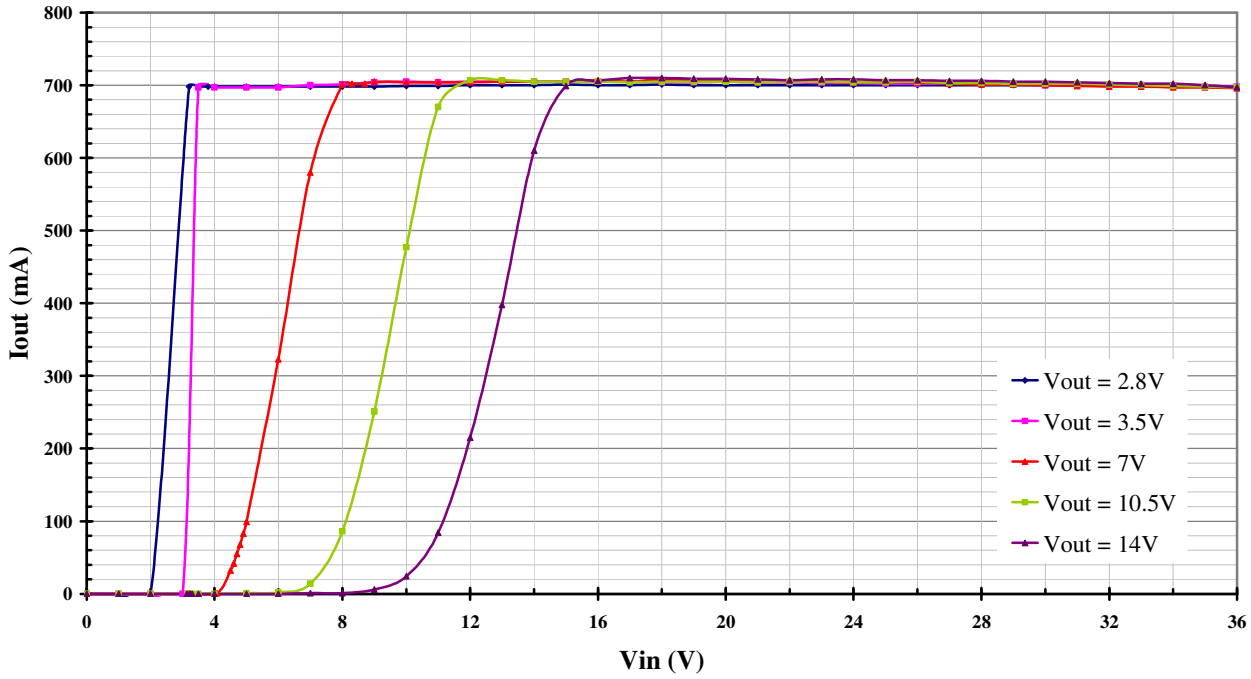

Figure 21. Iout vs. Vin, Iout = 700mA and Vout = Constant Values

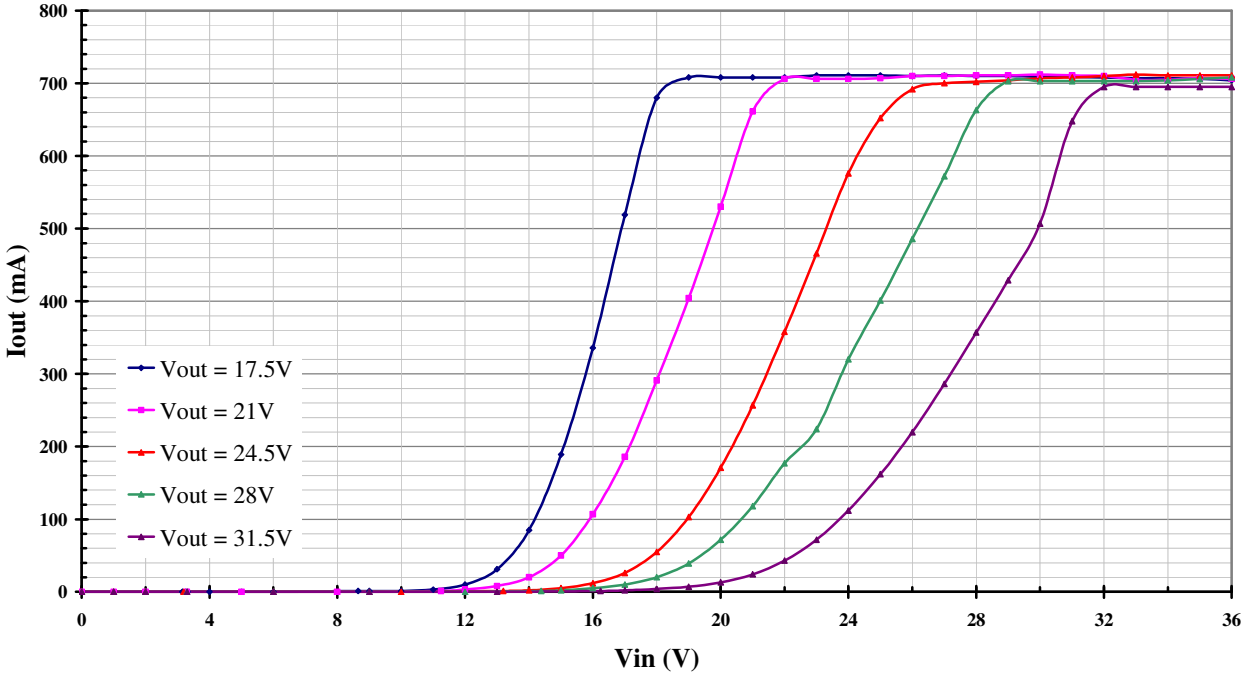

Figure 22. Iout vs. Vin, Iout = 700mA and Vout = Constant Values

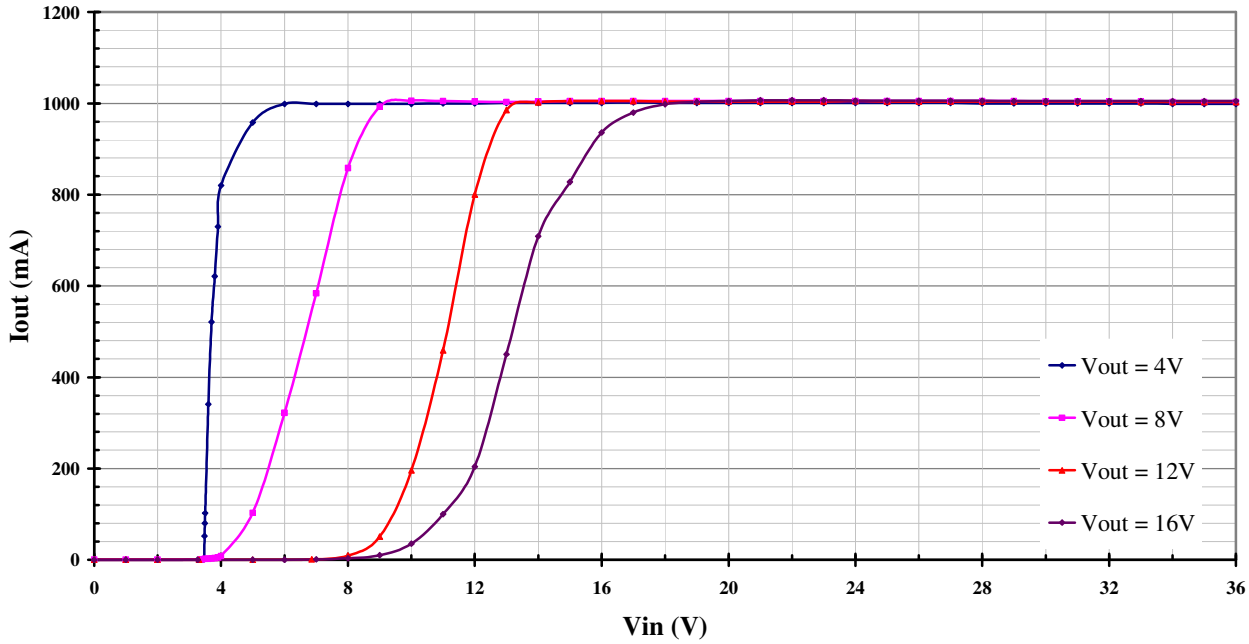

Figure 23. Iout vs. Vin, Iout = 1000mA and Vout = Constant Values

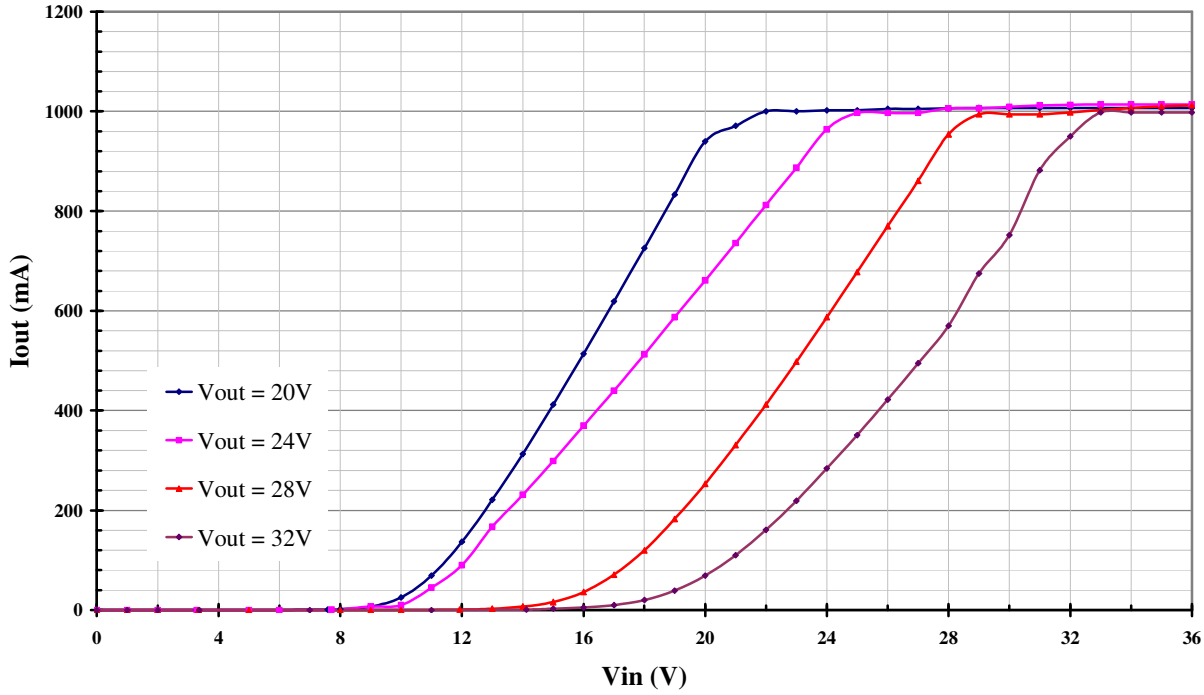

Figure 24. Iout vs. Vin, Iout = 1000mA and Vout = Constant Values

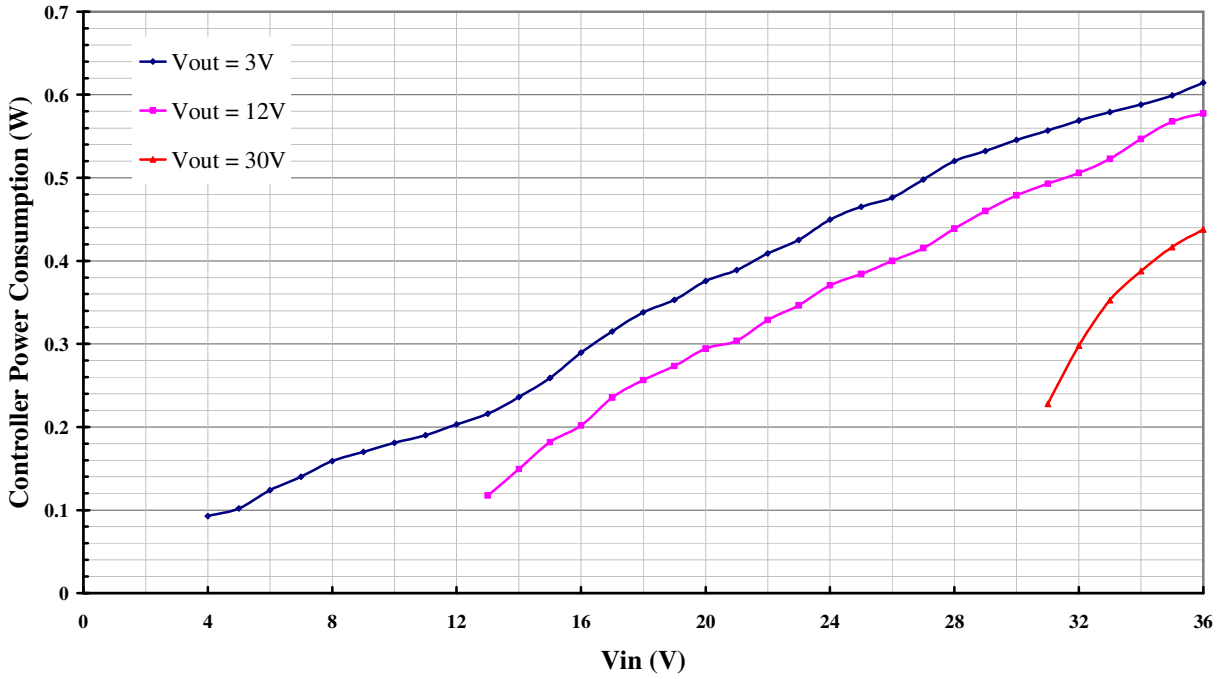

Figure 25. Controller Power Consumption vs. Vin
Iout = 350mA and Vout = Constant Values

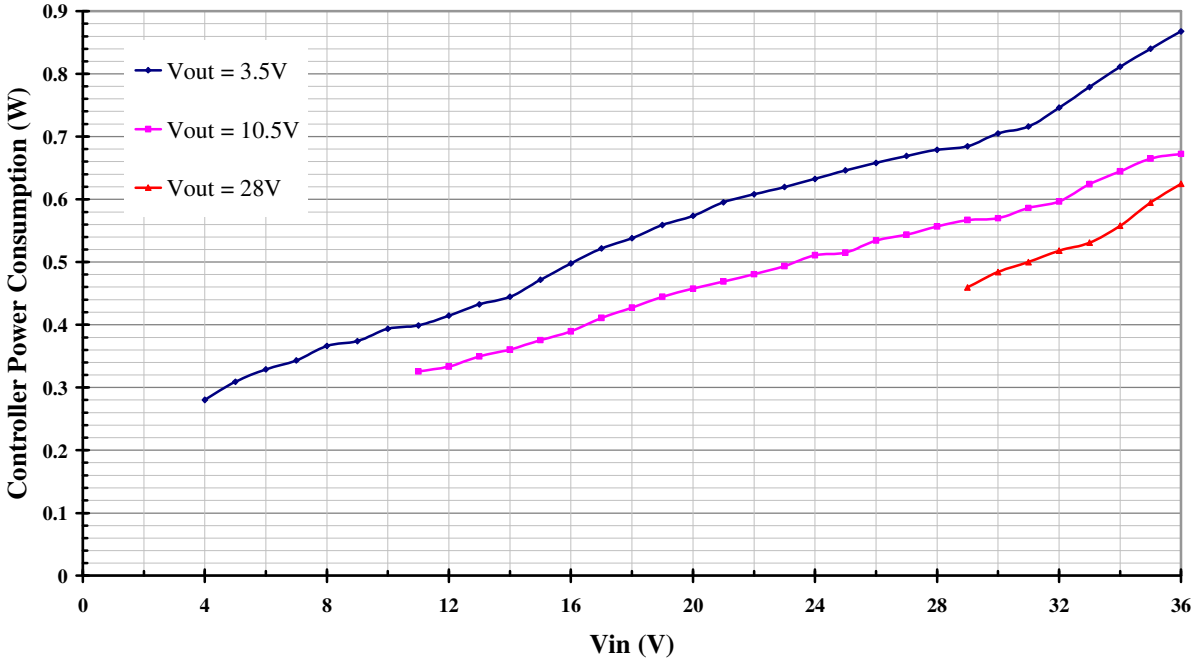

Figure 26. Conttoller Power Consumption vs. Vin
Iout = 700mA and Vout = Constant Values

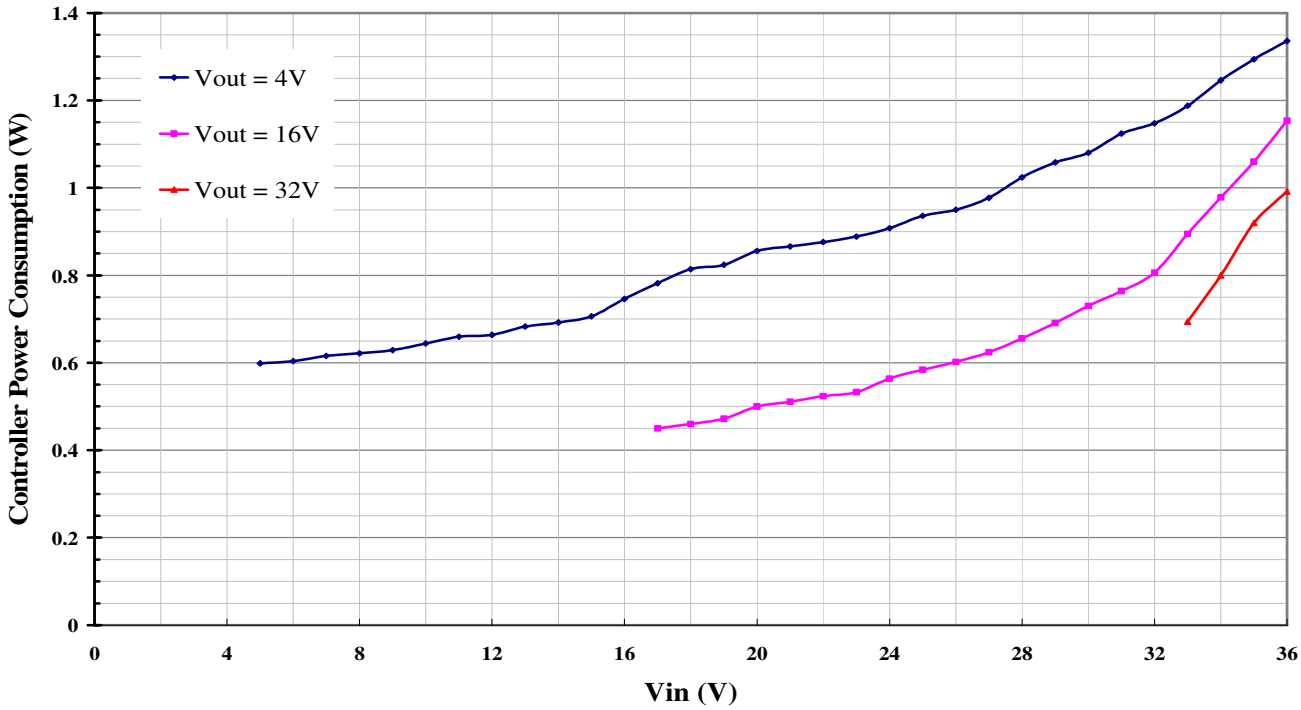

Figure 27. Controller Power Consumption vs. Vin
Iout = 1000mA and Vout = Constant Values