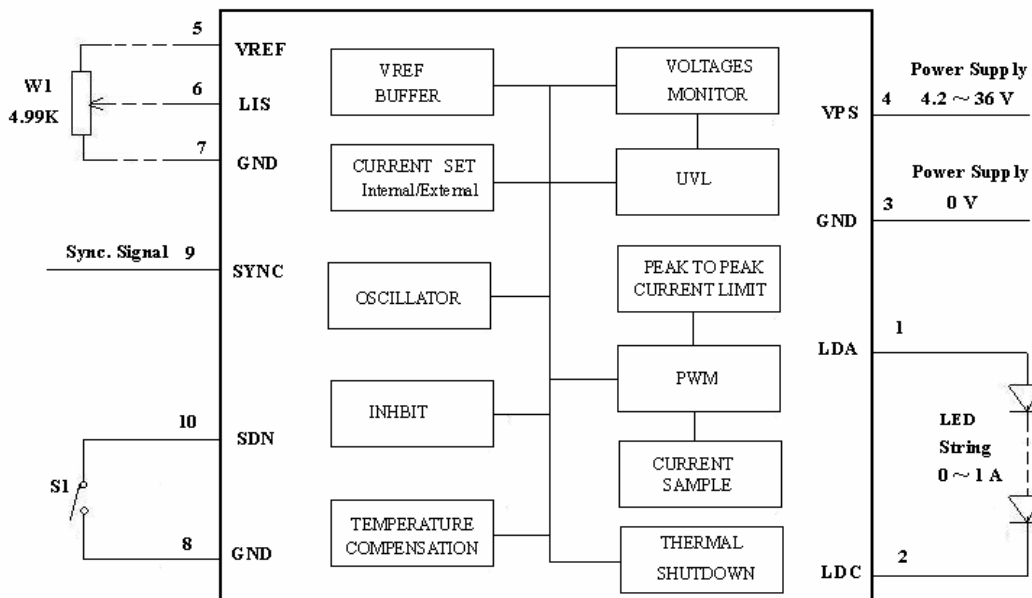
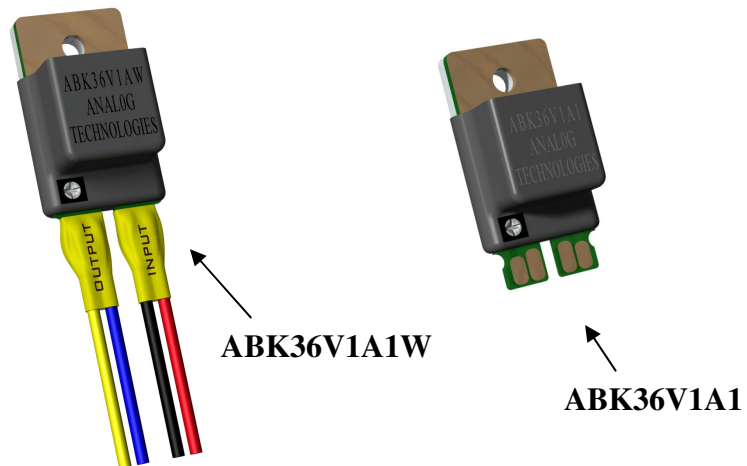


FEATURES

- High Efficiency: 90% typical
- No Heat Sink Required
- High Current without Heat Sink: 1A
- High Absolute Accuracy: <math><0.5\%</math>
- High Stability: $\pm 5\text{mA}@1\text{A}$
- High Modulation Speed: 10KHz
- Current Adjustable or Fixed Versions
- Compact Size

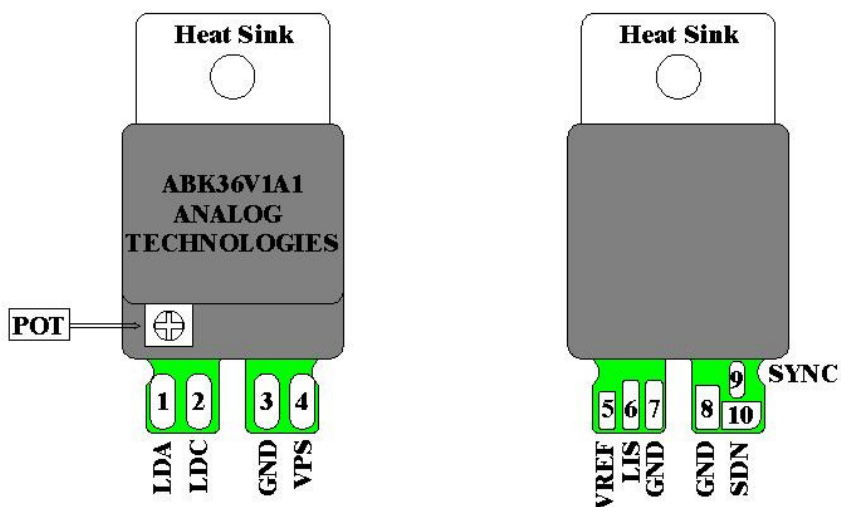
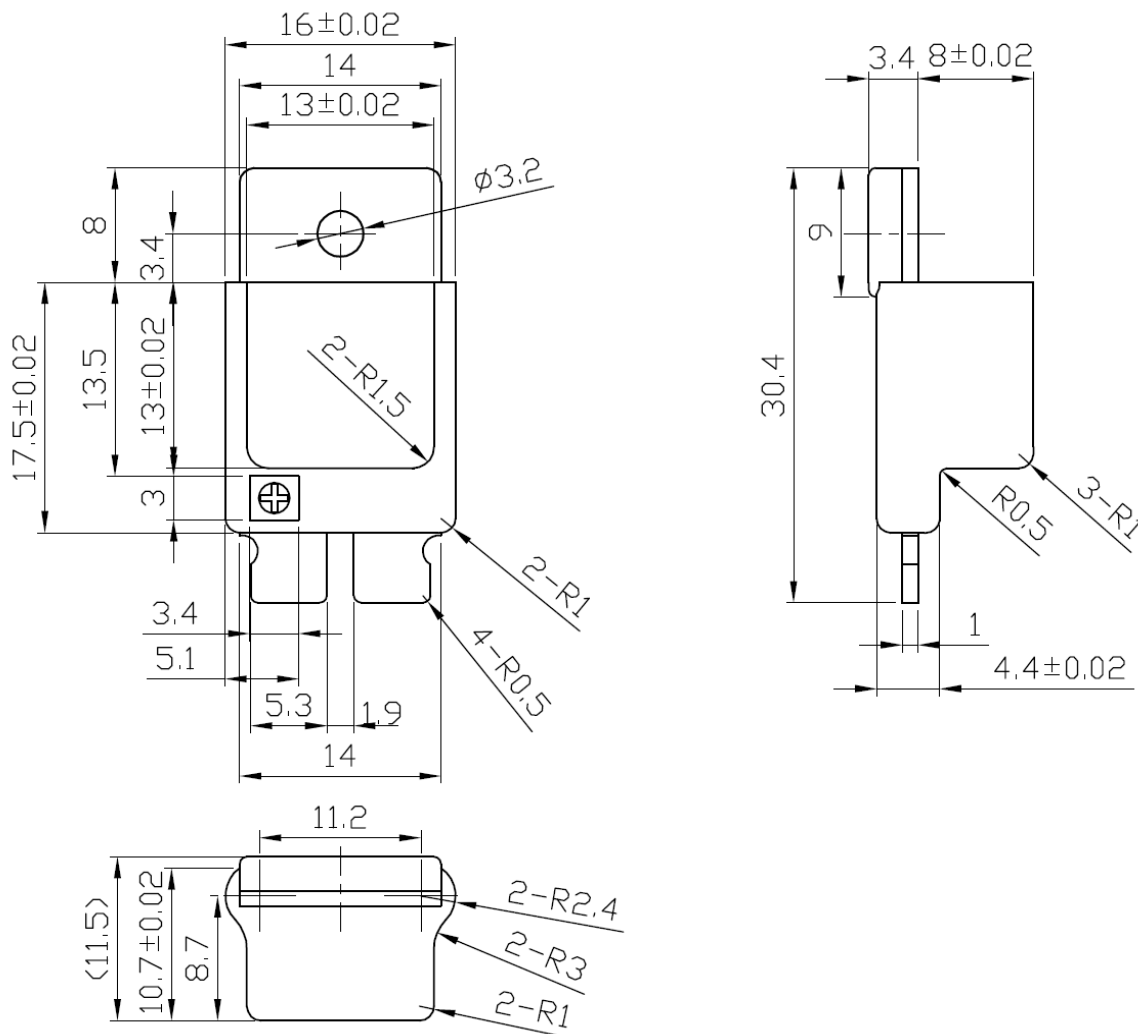


APPLICATIONS

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

SPECIFICATIONS

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





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

NOTICE

- ATI warrants performance of its products for one year to the specifications applicable at the time of sale, except for those being damaged by excessive abuse. Products found not meeting the specifications within one year from the date of sale can be exchanged free of charge.
- 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.
- 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.
- Customers are responsible for their applications using ATI components. In order to minimize risks associated with the customers' applications, adequate design and operating safeguards must be provided by the customers to minimize inherent or procedural hazards. ATI assumes no liability for applications assistance or customer product design.
- ATI does not warrant or represent that any license, either express or implied, is granted under any patent right, copyright, mask work right, or other intellectual property right of ATI covering or relating to any combination, machine, or process in which such products or services might be or are used. ATI's publication of information regarding any third party's products or services does not constitute ATI's approval, warranty or endorsement thereof.
- IP (Intellectual Property) Ownership: ATI retains the ownership of full rights for special technologies and/or techniques embedded in its products, the designs for mechanics, optics, plus all modifications, improvements, and inventions made by ATI for its products and/or projects.

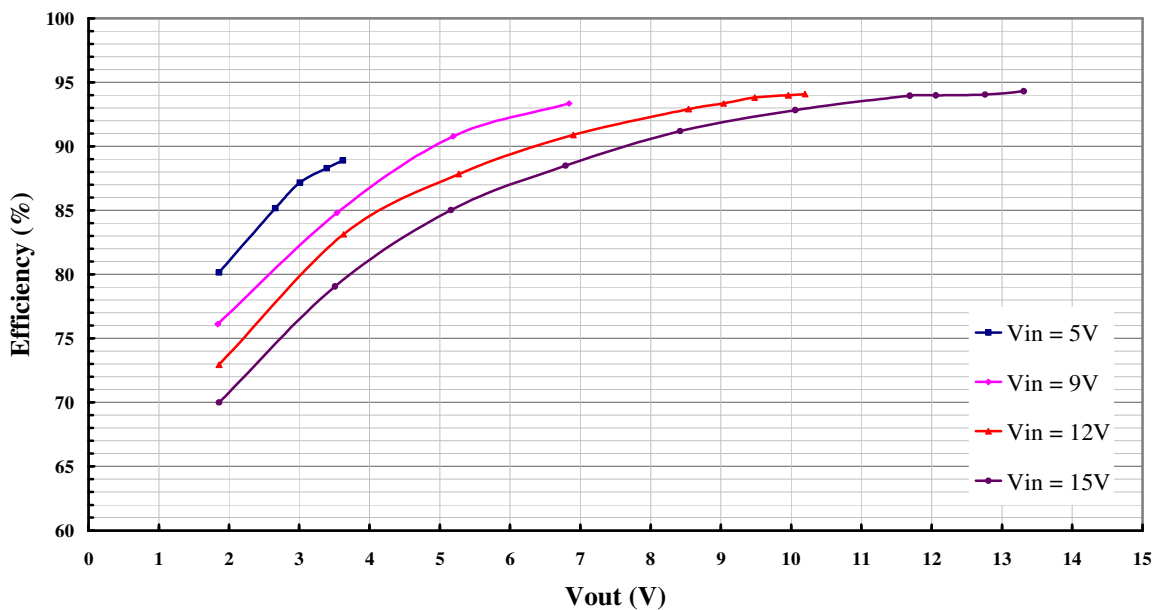


Figure 1. Efficiency vs. Vout, Iout = 350mA and Vin = Constant Values

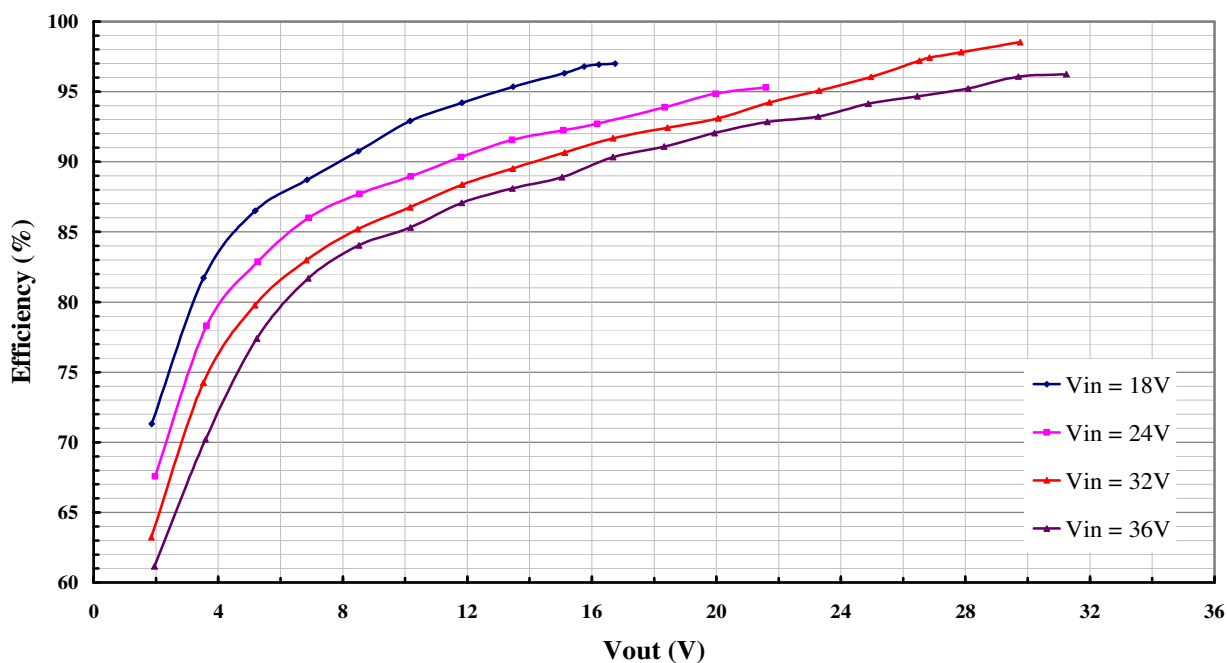


Figure 2. Efficiency vs. Vout, Iout = 350mA and Vin = Constant Values

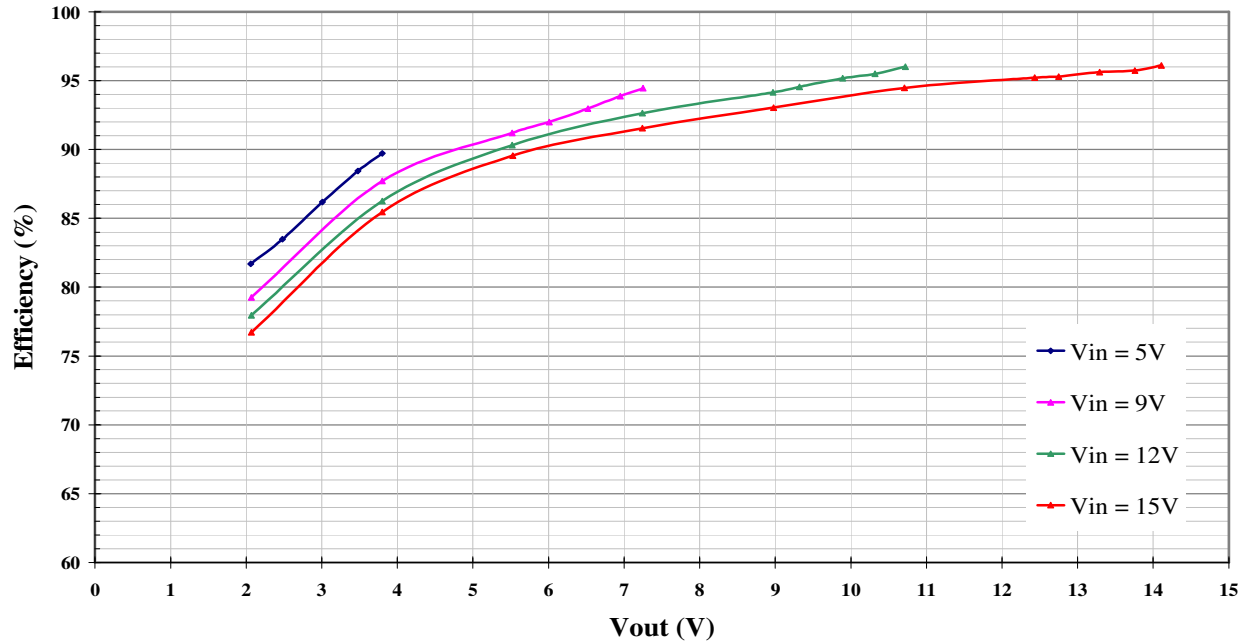


Figure 3. Efficiency vs. Vout, Iout = 700mA and Vin = Constant Values

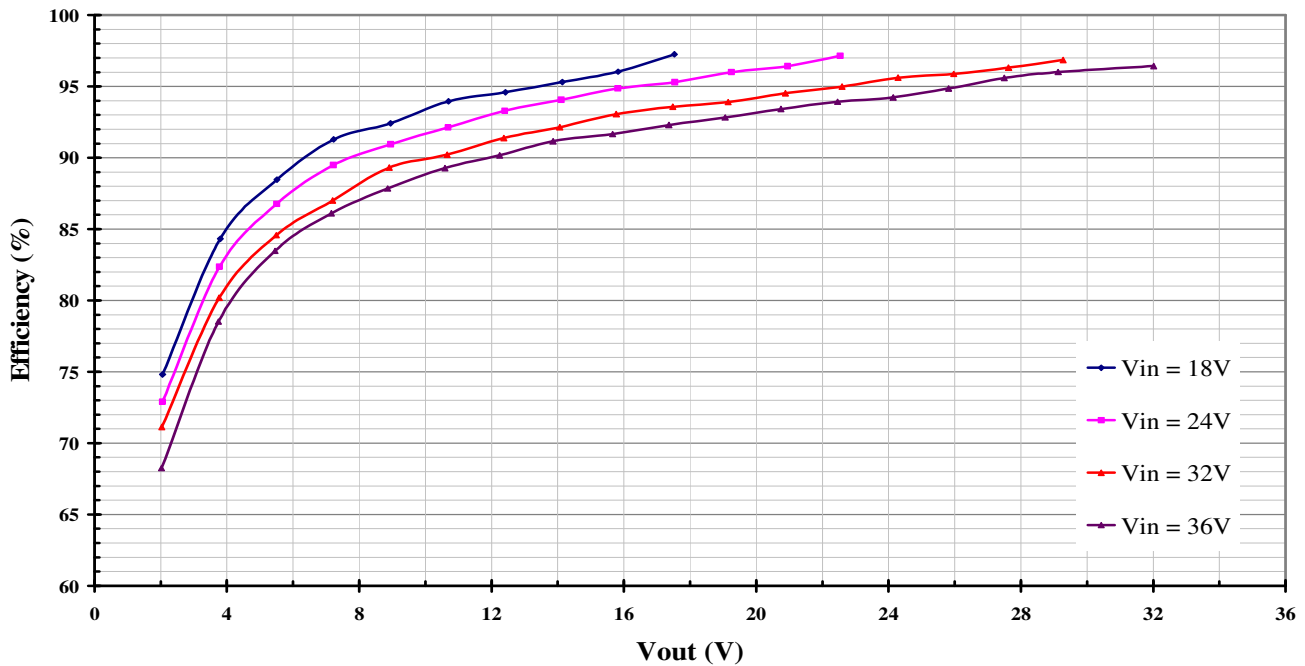


Figure 4. Efficiency vs. Vout, Iout = 700mA and Vin = Constant Values

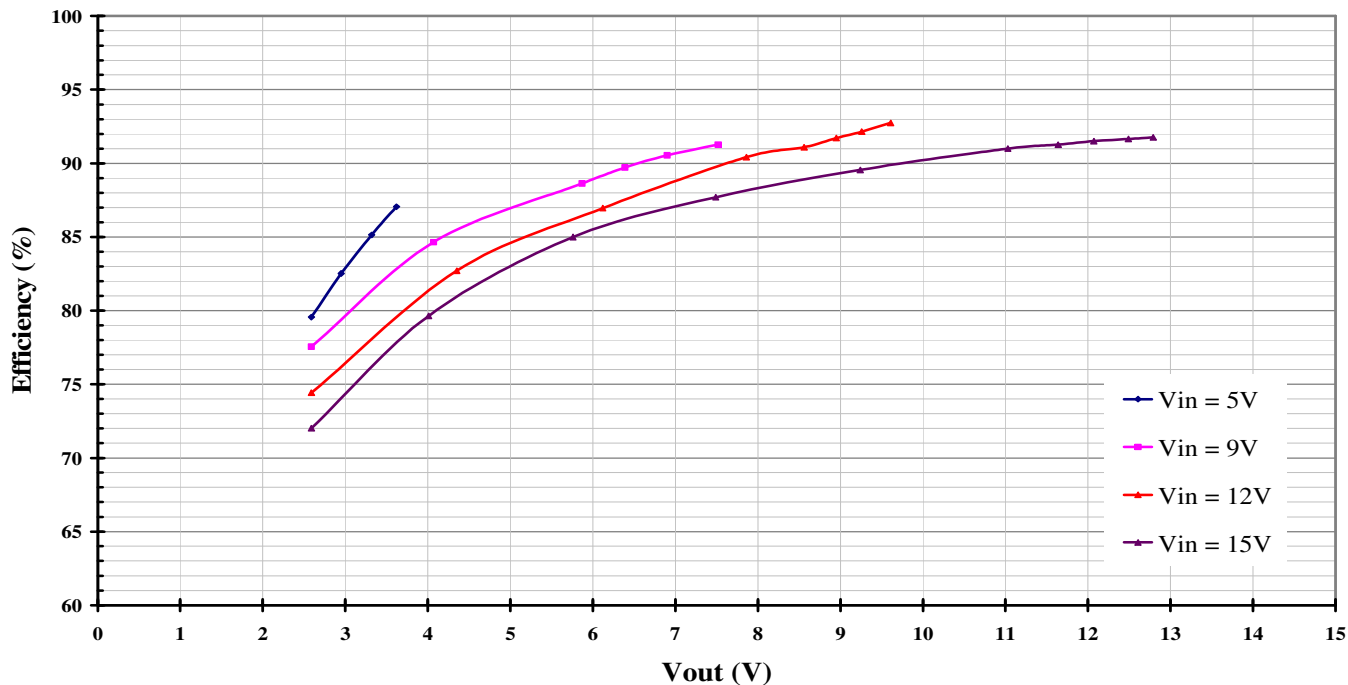


Figure 5. Efficiency vs. Vout, Iout = 1000mA and Vin = Constant Values

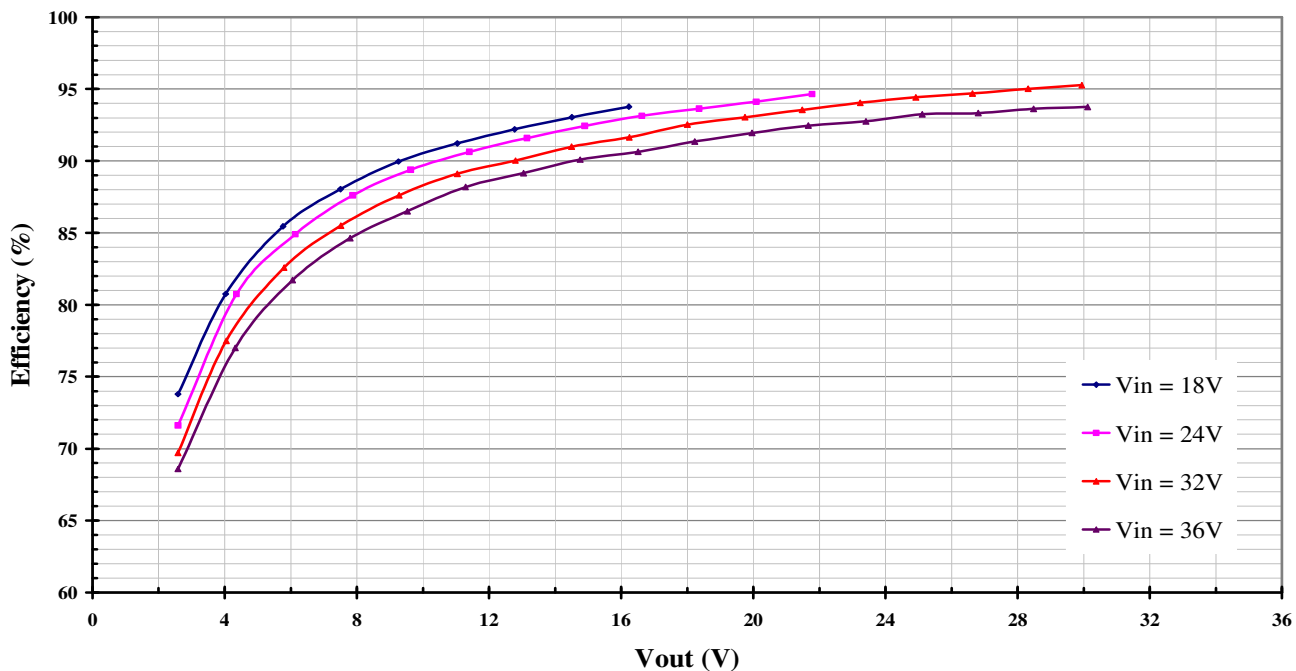


Figure 6. Efficiency vs. Vout, Iout = 1000mA and Vin = Constant Values

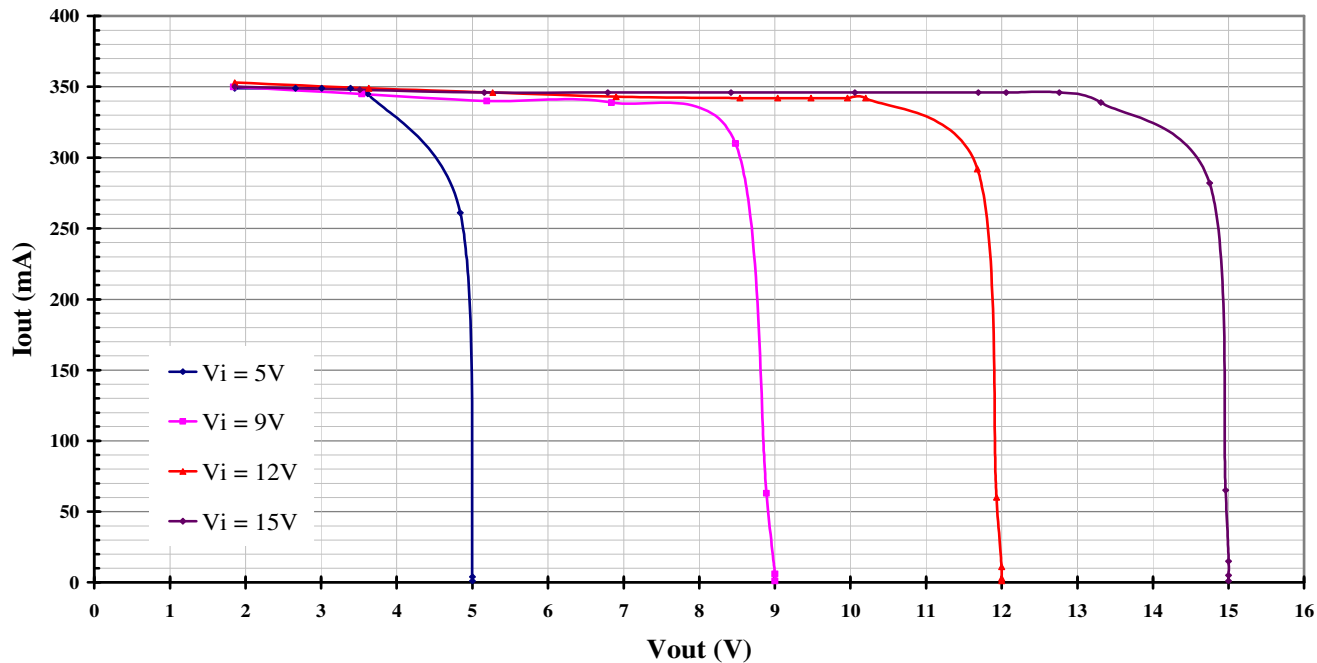


Figure 7. I_{out} vs. V_{out}, I_{out} = 350mA and V_{in} = Constant Values

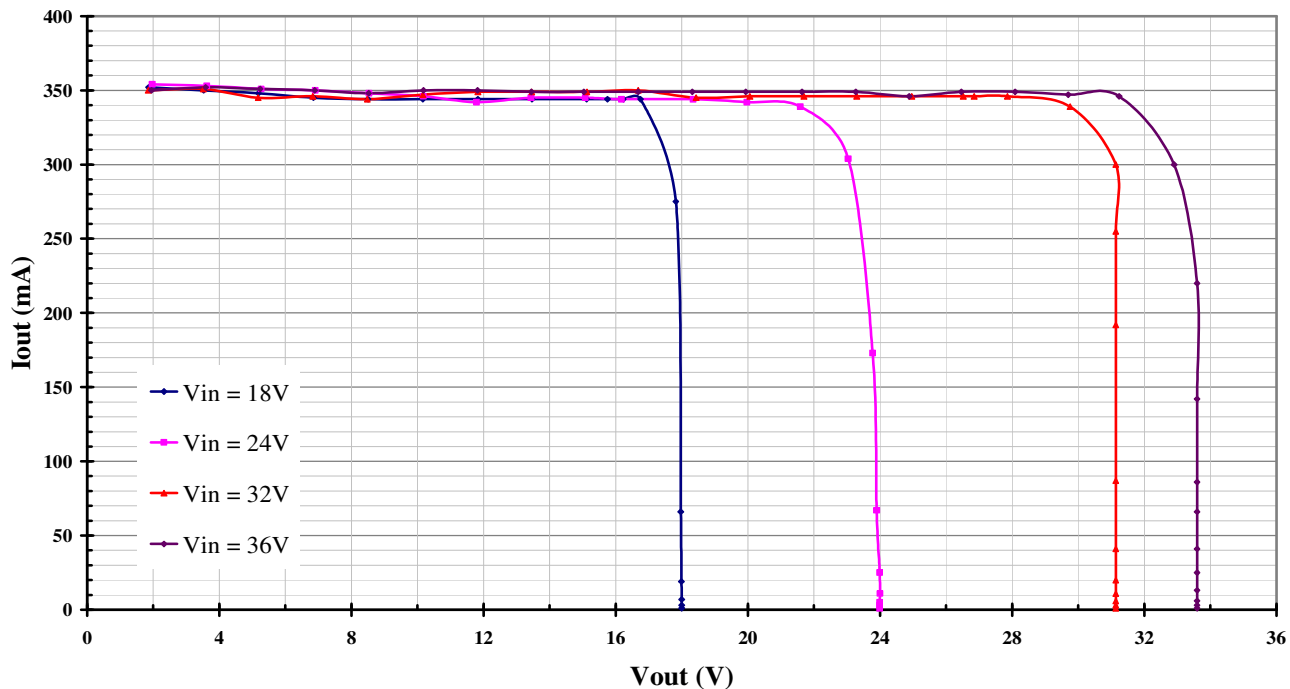


Figure 8. I_{out} vs. V_{out}, I_{out} = 350mA and V_{in} = Constant Values

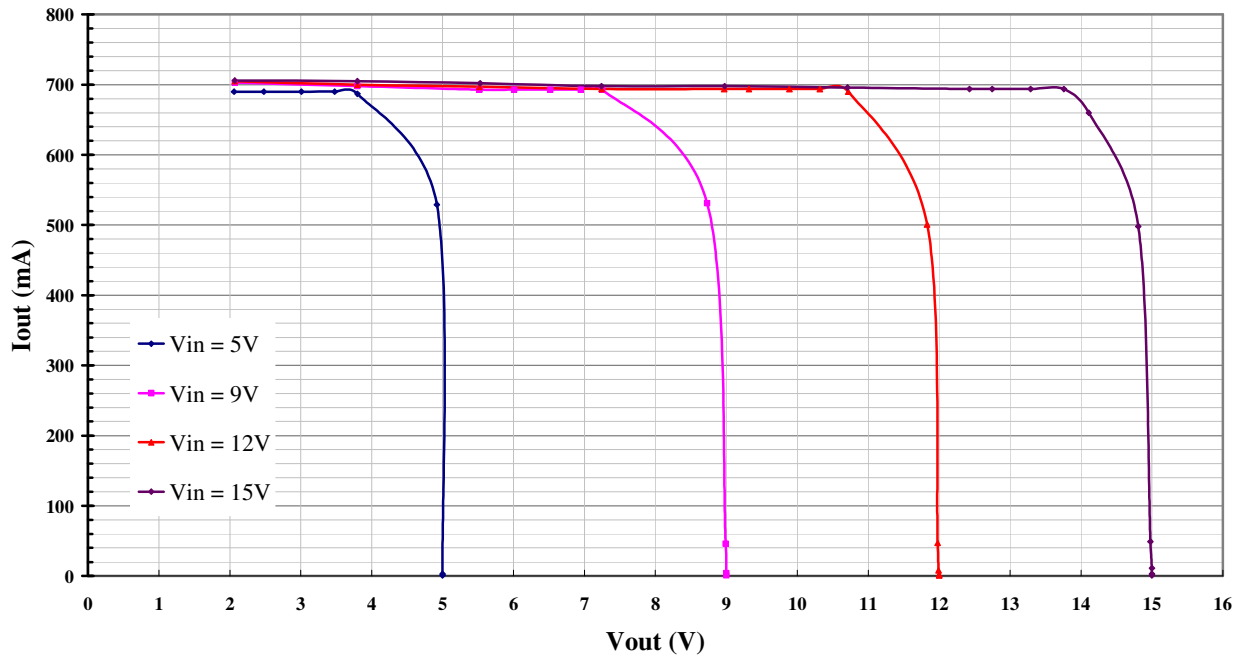


Figure 9. I_{out} vs. V_{out}, I_{out} = 700mA and V_{in} = Constant Values

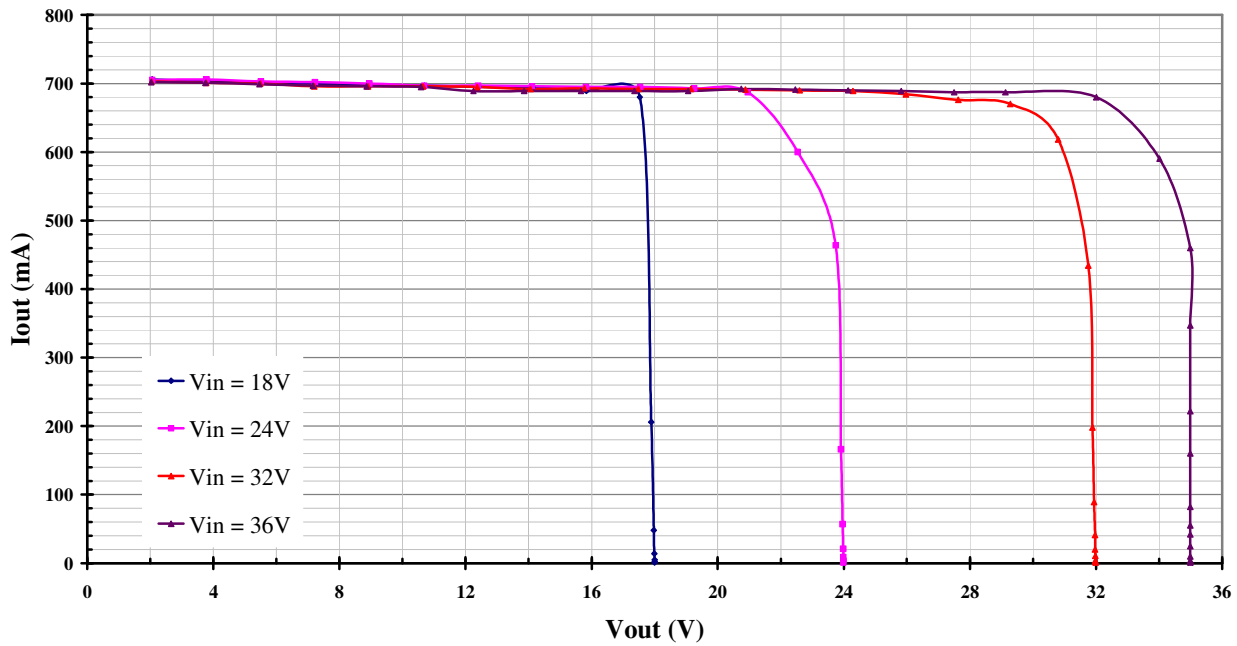


Figure 10 . I_{out} vs. V_{out}, I_{out} = 700mA and V_{in} = Constant Values

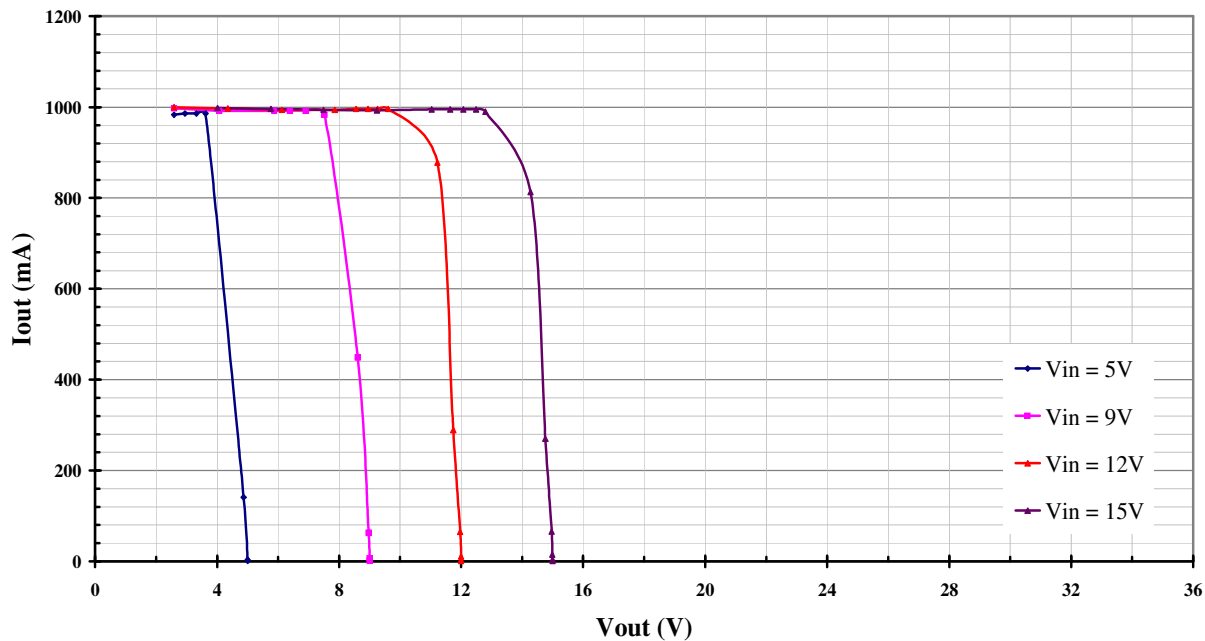


Figure 11 . Iout vs. Vout, Iout = 1000mA and Vin = Constant Values

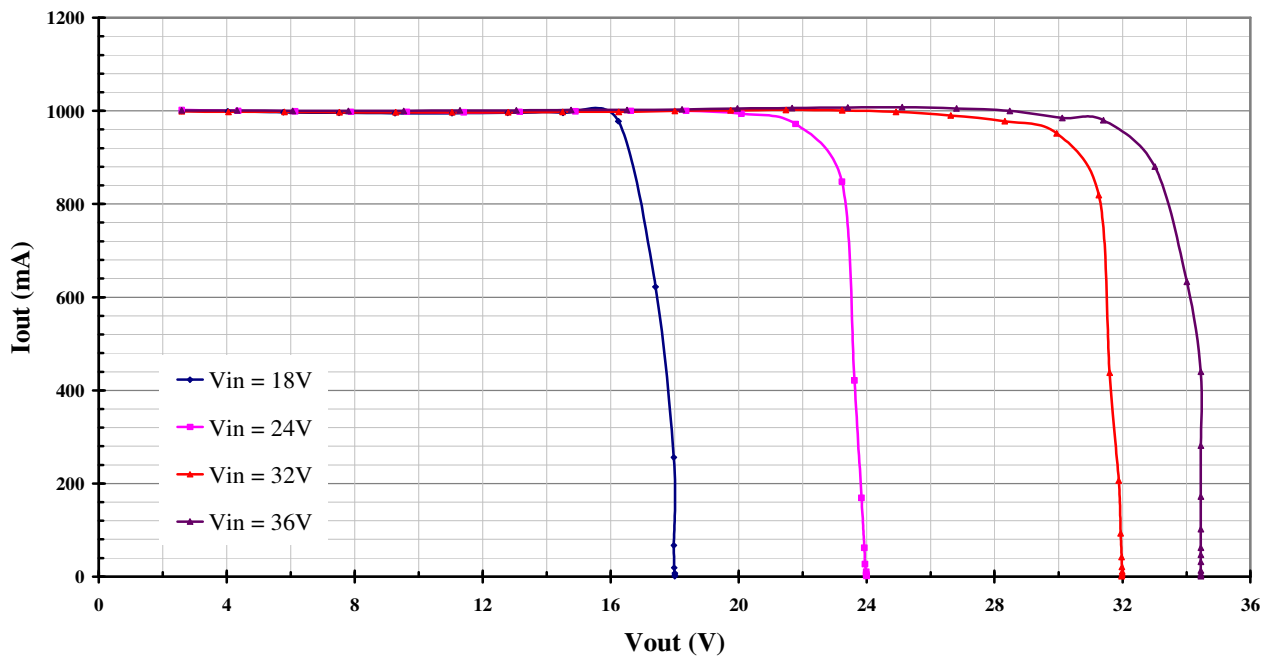


Figure12 . Iout vs. Vout, Iout = 1000mA and Vin = Constant Values

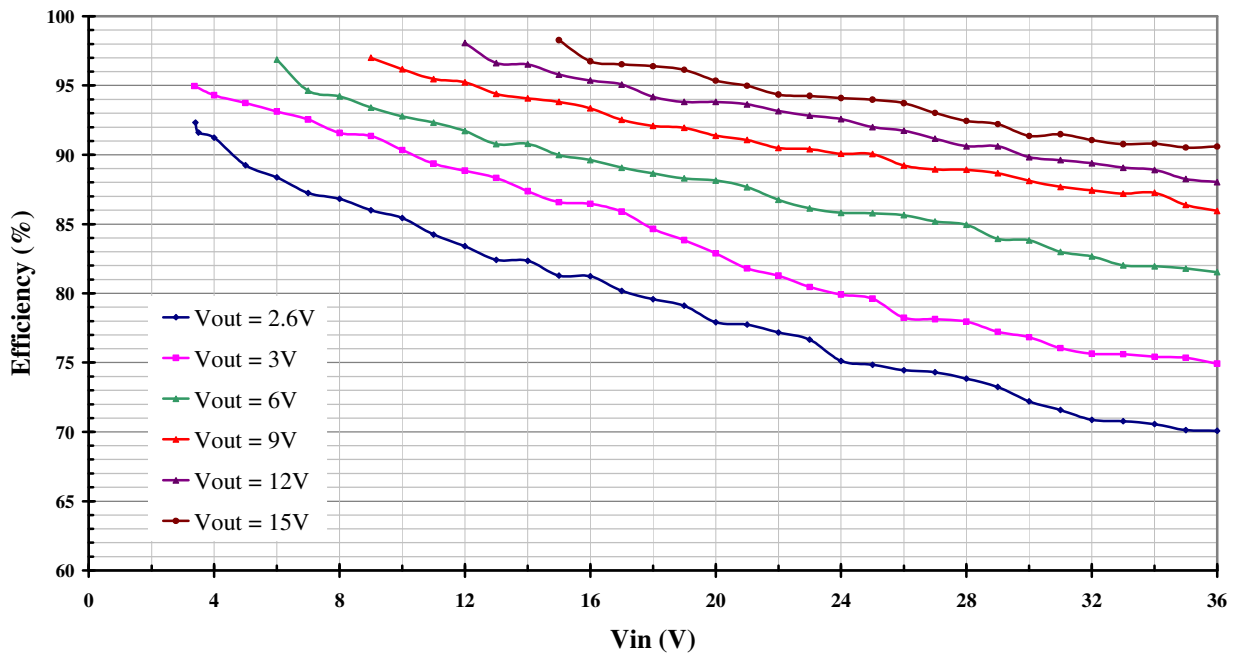


Figure 13. Efficiency vs. Vin, Iout = 350mA and Vout = Constant Values

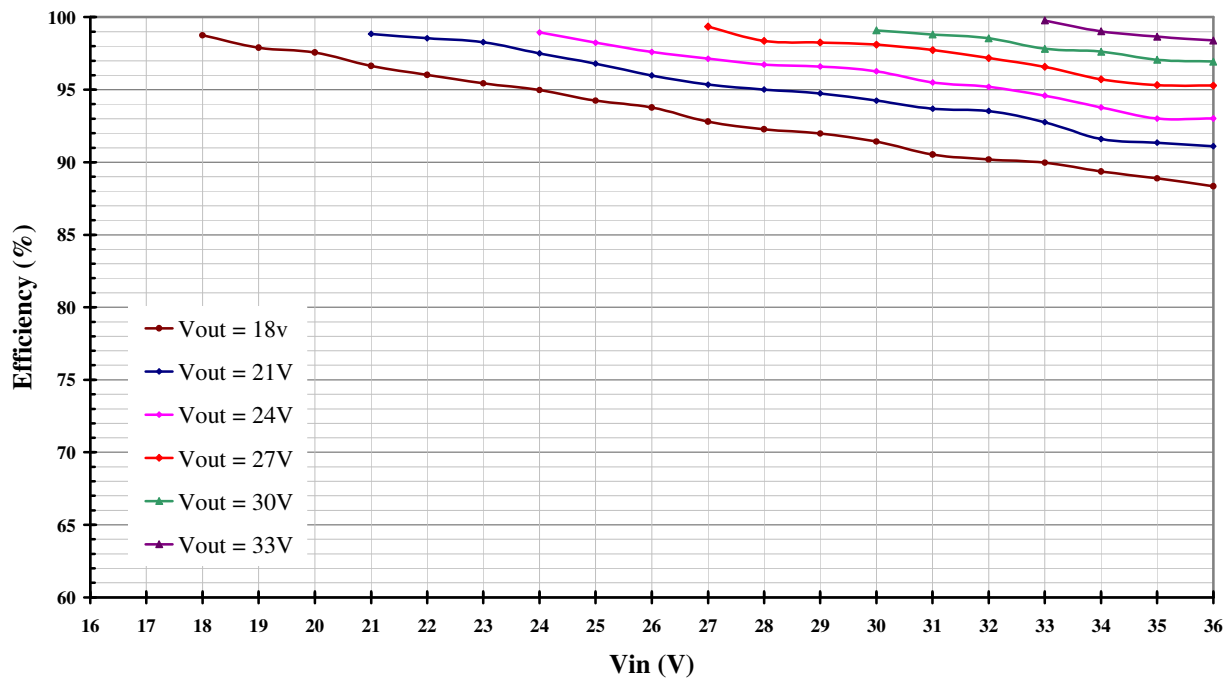


Figure 14. Efficiency vs. Vin, Iout = 350mA and Vout = Constant Values

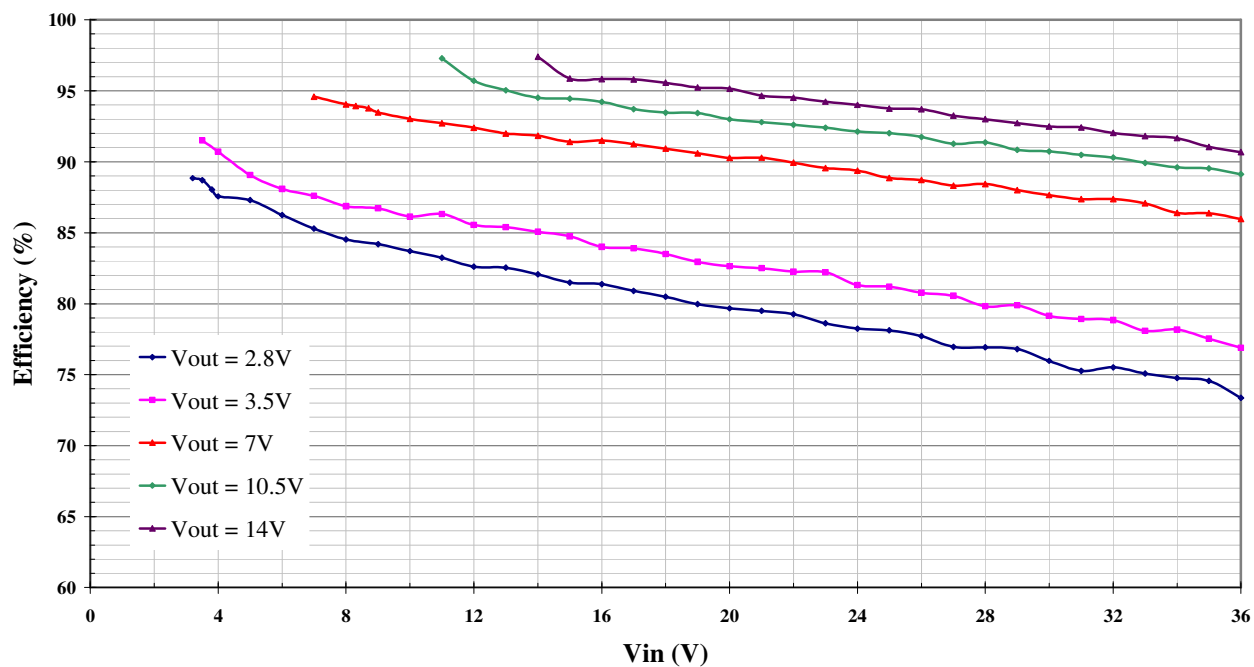


Figure 15. Efficiency vs. Vin, Iout = 700mA and Vout = Constant Values

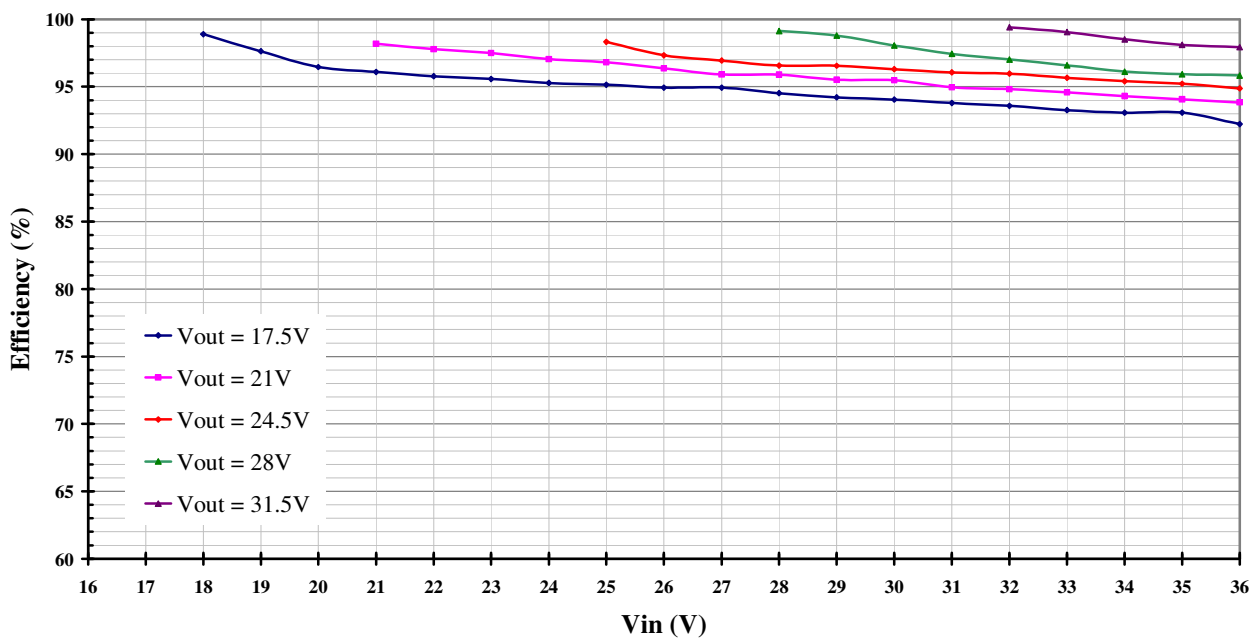


Figure 16. Efficiency vs. Vin, Iout = 700mA and Vout = Constant Values

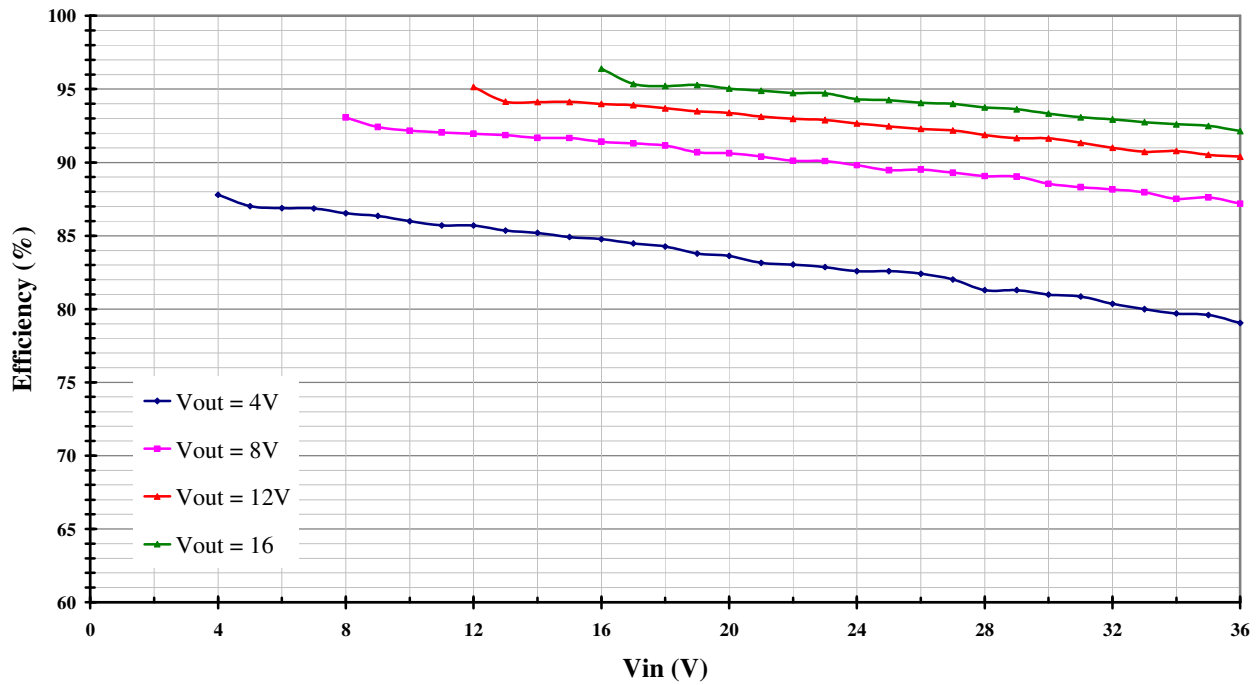


Figure 17. Efficiency vs. Vin, Iout = 1000mA and Vout = Constant Values

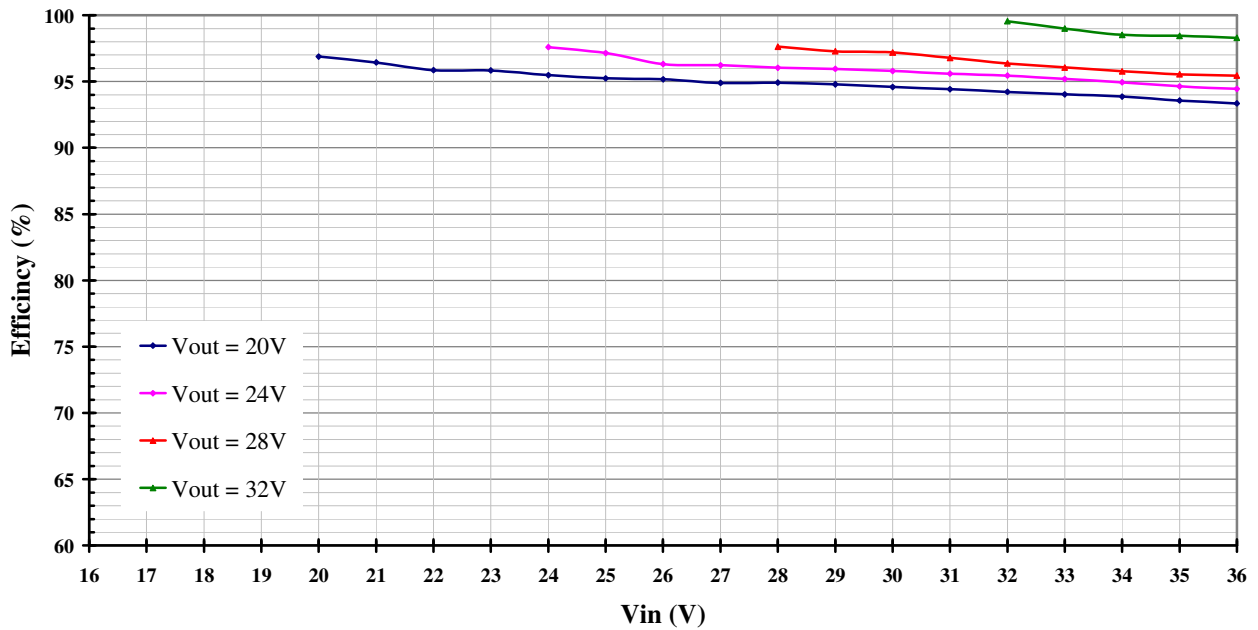


Figure 18. Efficiency vs. Vin, Iout = 1000mA and Vout = Constant Values

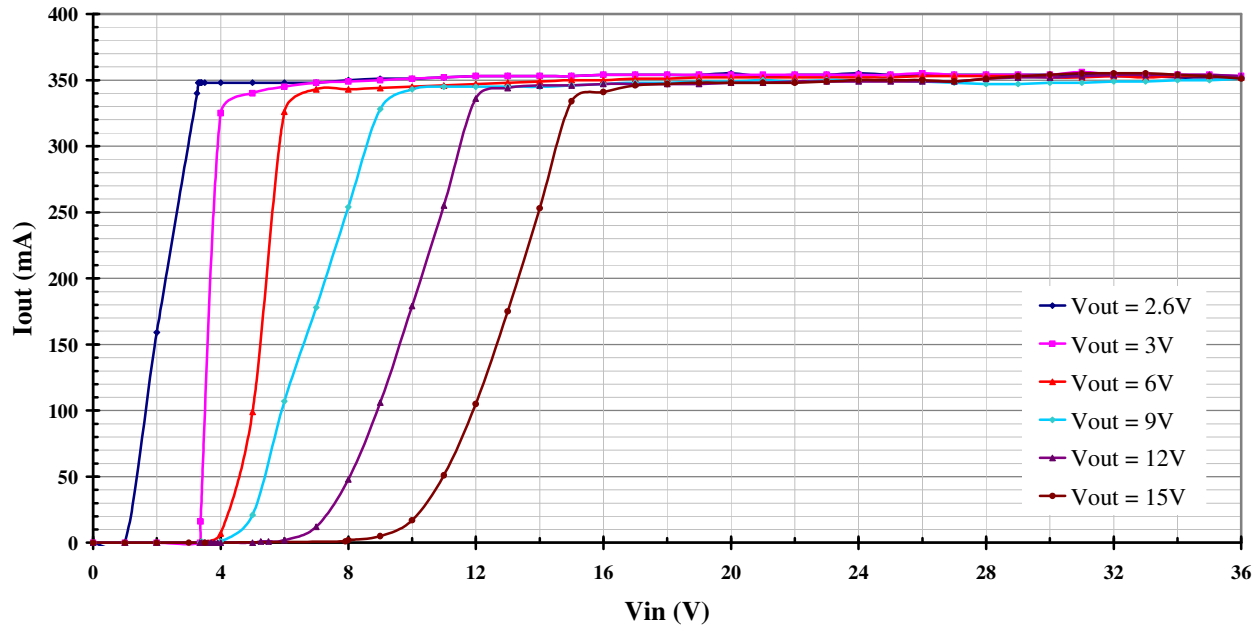


Figure 19. Iout vs. Vin, Iout = 350mA and Vout = Constant Values

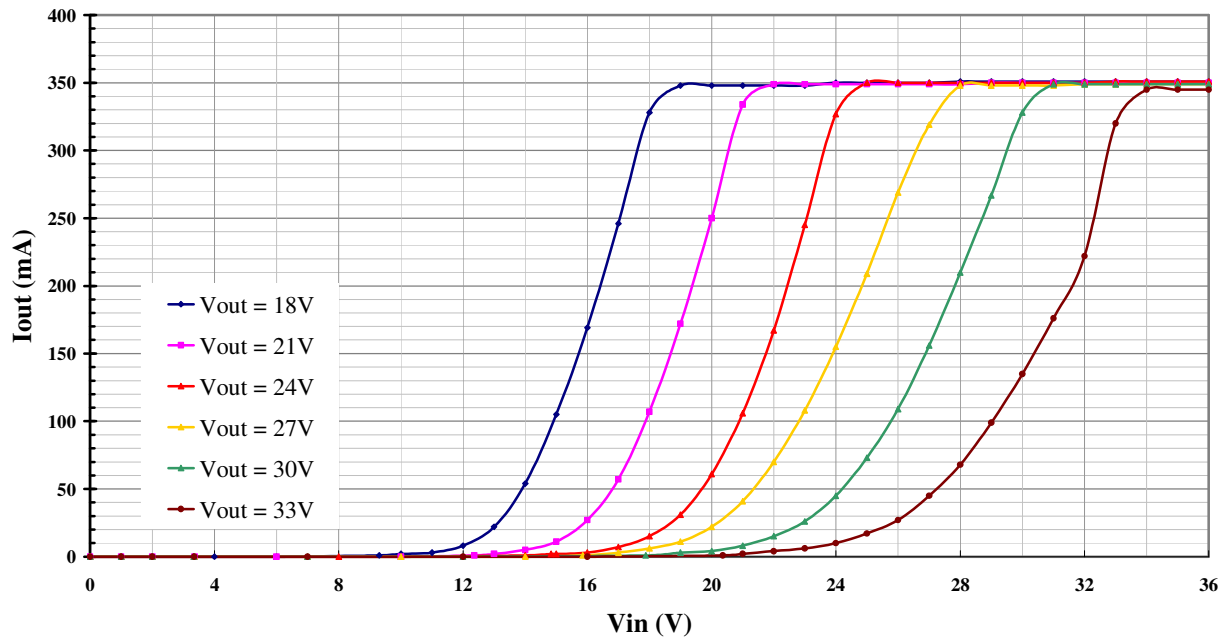


Figure 20. Iout vs. Vin, Iout = 350mA and Vout = Constant Values

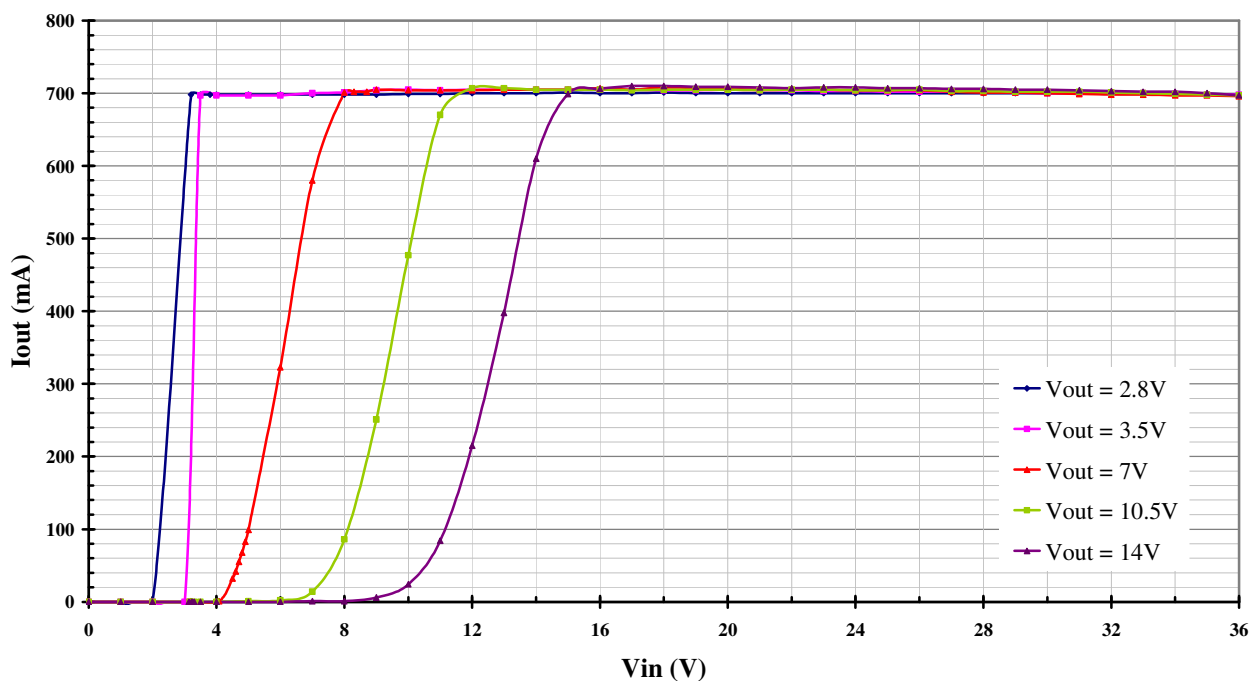


Figure 21. Iout vs. Vin, Iout = 700mA and Vout = Constant Values

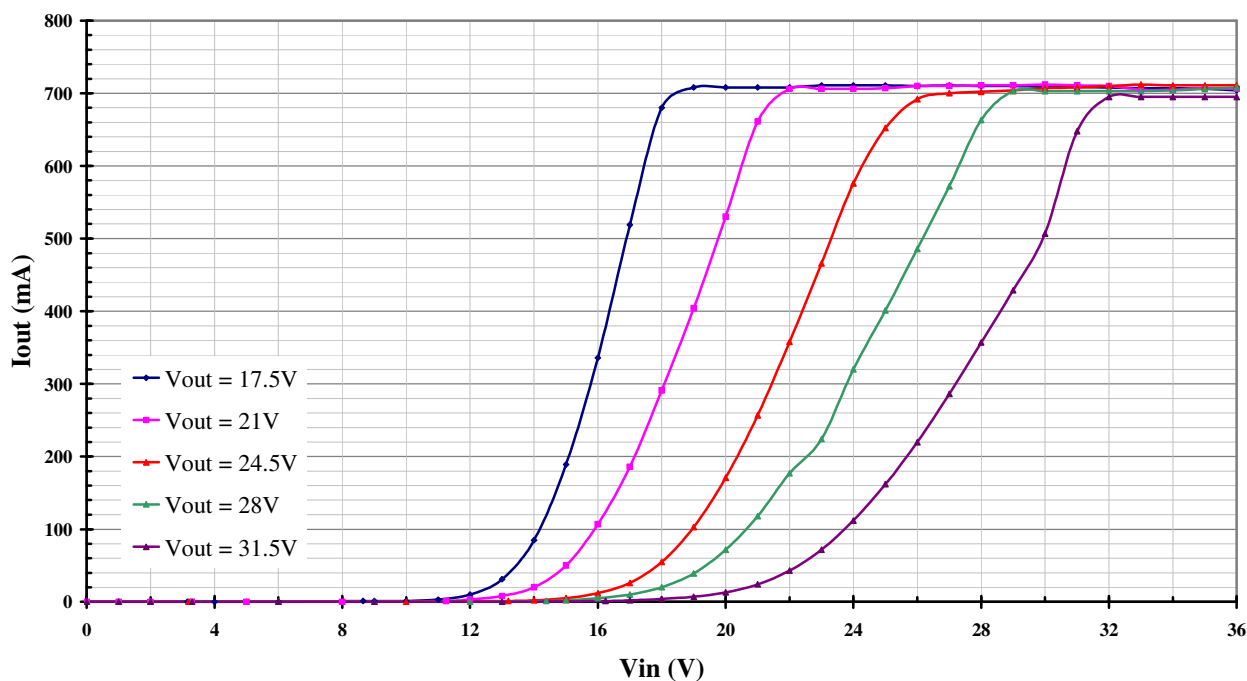


Figure 22. Iout vs. Vin, Iout = 700mA and Vout = Constant Values

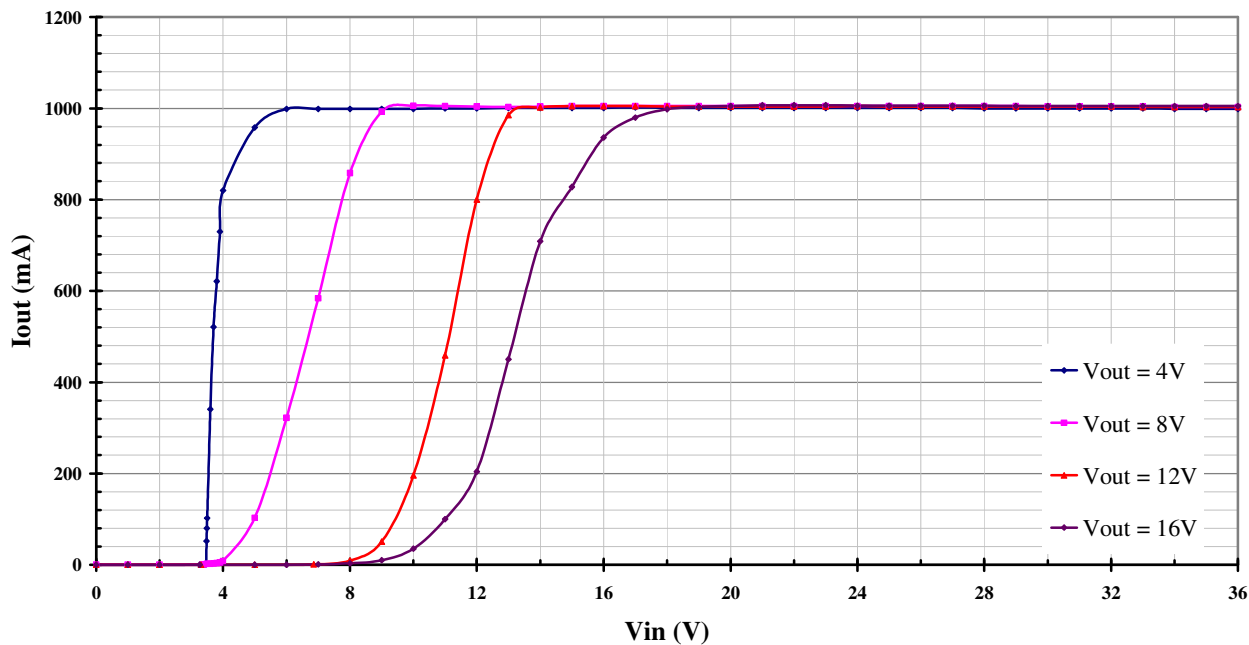


Figure 23. Iout vs. Vin, Iout = 1000mA and Vout = Constant Values

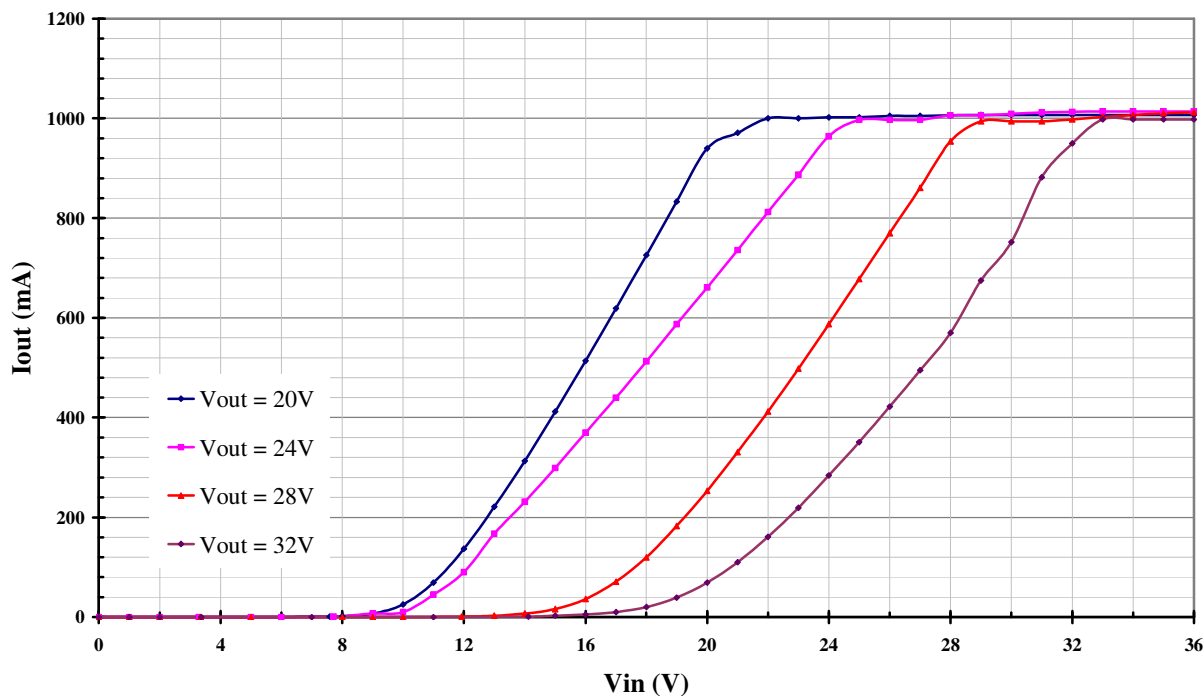


Figure 24. Iout vs. Vin, Iout = 1000mA and Vout = Constant Values

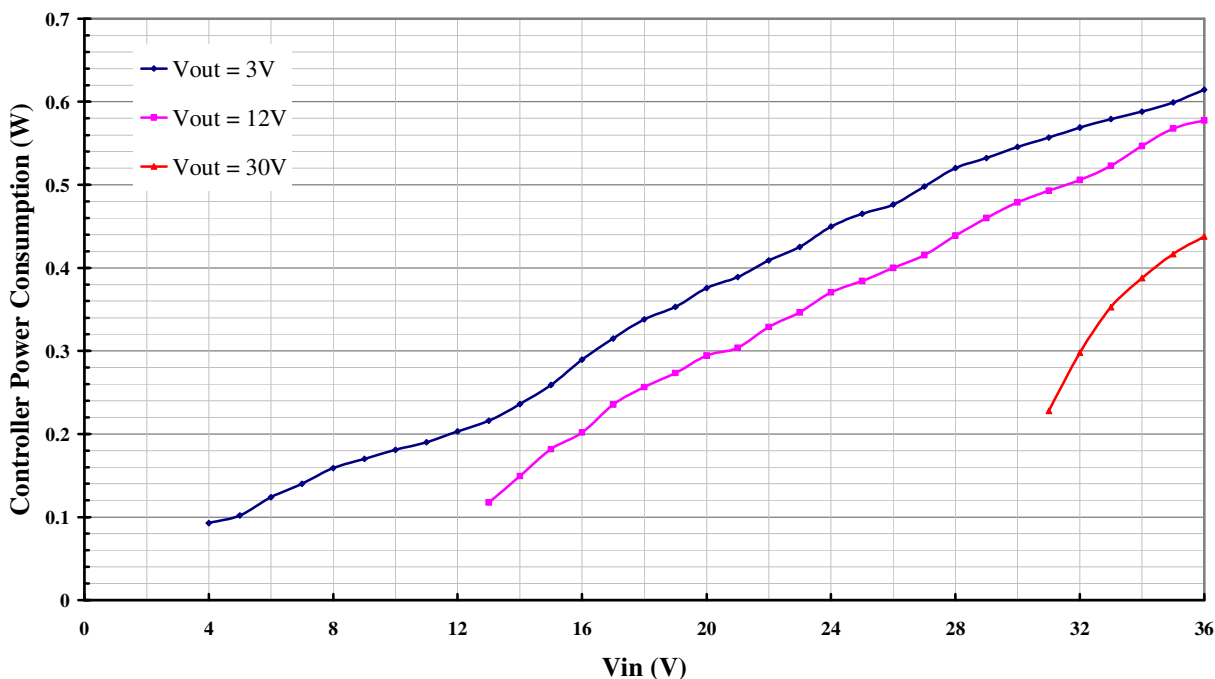


Figure 25. Controller Power Consumption vs. Vin
Iout = 350mA and Vout = Constant Values

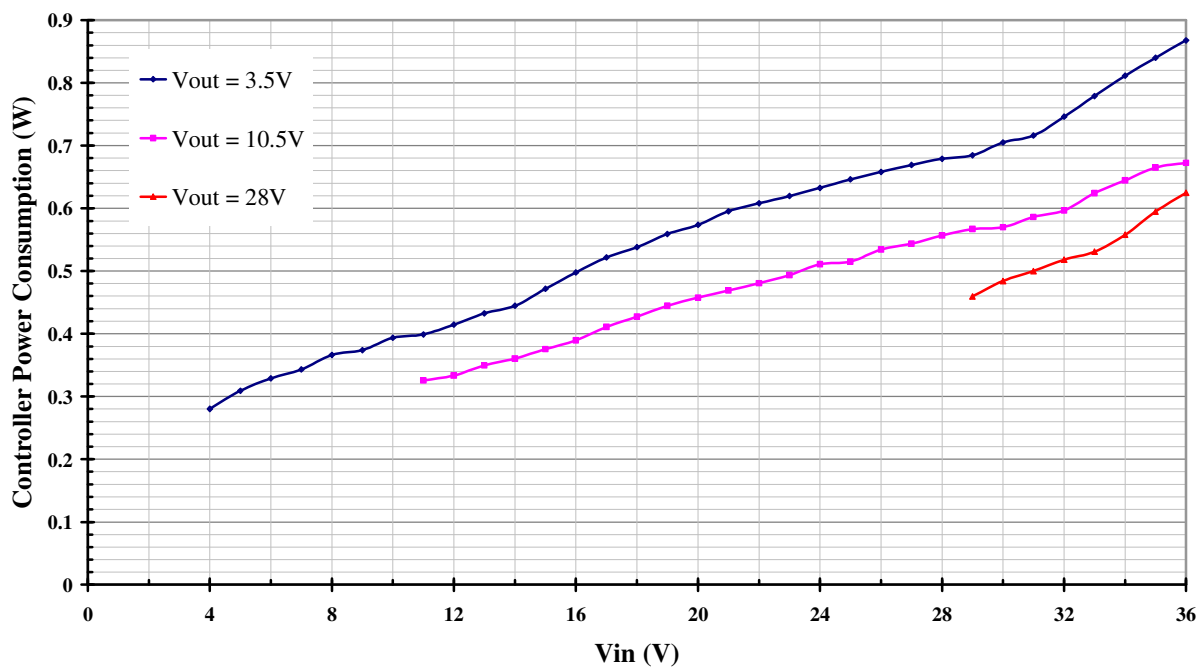


Figure 26. Controller Power Consumption vs. Vin
Iout = 700mA and Vout = Constant Values

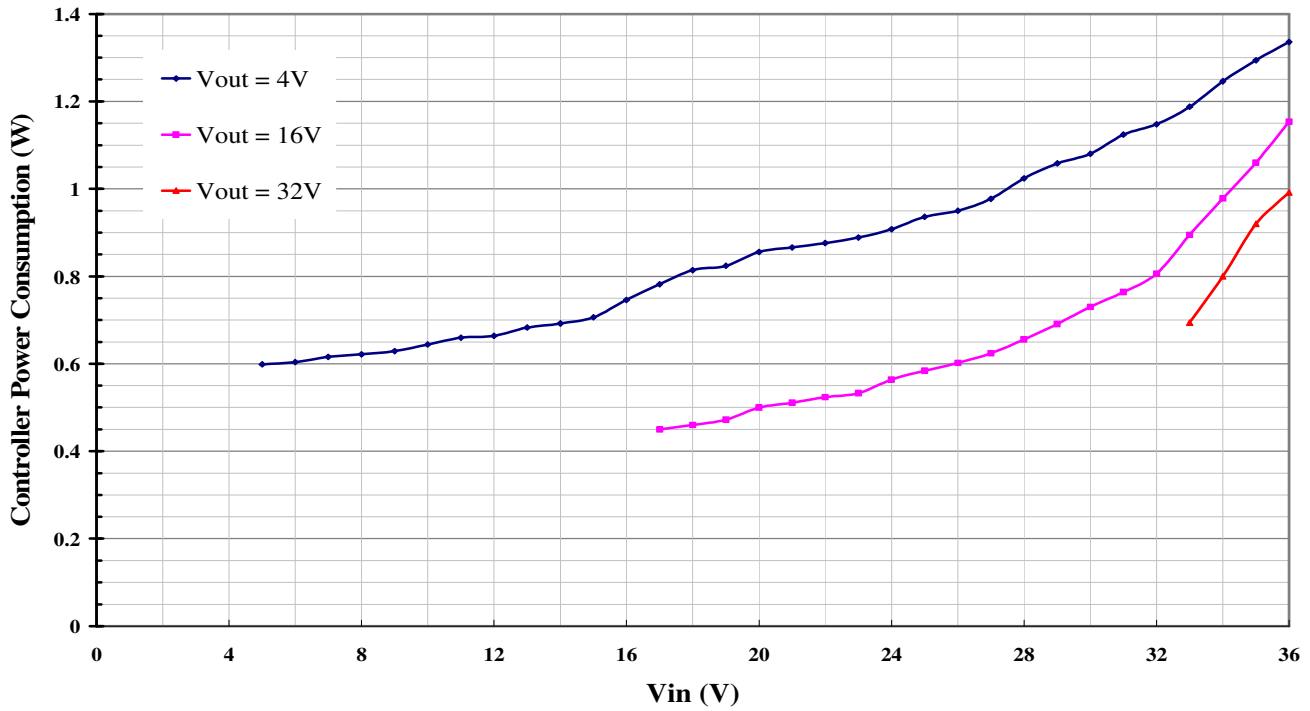


Figure 27. Controller Power Consumption vs. Vin
Iout = 1000mA and Vout = Constant Values