

Compact DC Switching Regulators

Pin Compatible with 78xx Linear Regulators

The V78 Series eliminates the need for a heat sink and saving users precious board space. Ideal for compact portable equipment, consumer electronics applications, and space critical commercial and industrial equipment. **Features:** • Non-isolated • Highly efficient • Wide input range • Able to provide positive or negative output • Short circuit protection • Thermal shutdown • Low ripple and noise

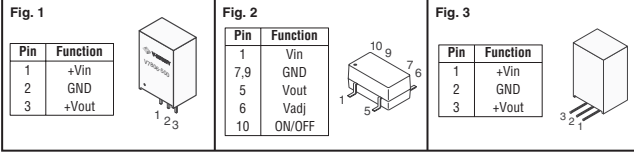
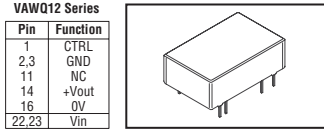


Fig.	Input Voltage Range (VDC)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%)	Min. Vin (min.)	Max. Vin (max.)	Digi-Key Part No.	Price Each 1	Price Each 10	CUI Part No.
V78xx-500 Series										
1	4.75 - 28	3.3	500	90%	87%	102-1708-ND		4.77	4.57	V7803-500
	6.5 - 32	5	500	93%	84%	102-1709-ND		4.77	4.57	V7805-500
	8 - 32	6.5	500	94%	87%	102-1710-ND		4.77	4.57	V7806-500
	11 - 32	9	500	95%	91%	102-1711-ND		4.77	4.57	V7809-500
	15 - 32	12	500	95%	92%	102-1712-ND		4.77	4.57	V7812-500
	18 - 32	15	500	96%	93%	102-1713-ND		4.77	4.57	V7815-500
V78xx-1000 Series										
1	4.75 - 28	3.3	1,000	90%	83%	102-1714-ND		5.69	5.44	V7803-1000
	6.5 - 32	5	1,000	93%	88%	102-1715-ND		5.69	5.44	V7805-1000
	8 - 32	6.5	1,000	94%	90%	102-1716-ND		5.69	5.44	V7806-1000
	11 - 32	9	1,000	95%	92%	102-1717-ND		5.69	5.44	V7809-1000
	15 - 32	12	1,000	95%	94%	102-1718-ND		5.69	5.44	V7812-1000
V78xx-500-SMT Series										
2	4.5 - 28	3.3	500	90%	75%	102-1957-1-ND		9.36	8.17	V7803-500-SMT
	4.5 - 28	3.3	500	90%	75%	102-1957-2-ND		2339.93/500	7803-500-SMT	
	6 - 28	5	500	94%	81%	102-1958-1-ND		9.36	8.17	V7805-500-SMT
	6 - 28	5	500	94%	81%	102-1958-2-ND		2339.93/500	V7805-500-SMT	
	14 - 28	12	500	95%	90%	102-1959-1-ND		9.36	8.17	V7812-500-SMT
	14 - 28	12	500	95%	90%	102-1959-2-ND		2339.93/500	V7812-500-SMT	
3	17 - 28	15	500	96%	92%	102-1960-1-ND		9.36	8.17	V7815-500-SMT
	17 - 28	15	500	96%	92%	102-1960-2-ND		2339.93/500	V7815-500-SMT	
	17 - 28	15	500	96%	92%	102-1960-2-ND		2339.93/500	V7815-500-SMT	
V78xx-1500 Series										
3	4.75 - 18	2.5	1,500	88%	85%	102-2169-ND		7.62	7.29	V7802-1500
	4.75 - 18	3.3	1,500	91%	88%	102-2170-ND		7.62	7.29	V7803-1500
	6.5 - 18	5	1,500	93%	91%	102-2171-ND		7.62	7.29	V7805-1500
	8 - 18	6.5	1,500	95%	93%	102-2172-ND		7.62	7.29	V7806-1500
V78xx-2000 Series										
3	4.75 - 18	2.5	2,000	85%	83%	102-2173-ND		8.38	8.02	V7802-2000
	4.75 - 18	3.3	2,000	87%	86%	102-2174-ND		8.38	8.02	V7803-2000
	7 - 18	5	2,000	91%	88%	102-2175-ND		8.38	8.02	V7805-2000
	8.5 - 18	6.5	2,000	92%	91%	102-2176-ND		8.38	8.02	V7806-2000
V78xx-1000R Series, Right Angle										
3	4.75 - 28	3.3	1,000	90%	83%	102-2177-ND		5.69	5.44	V7803-1000R
	6.5 - 32	5	1,000	93%	88%	102-2178-ND		5.69	5.44	V7805-1000R
	8 - 32	6.5	1,000	94%	90%	102-2179-ND		5.69	5.44	V7806-1000R
	11 - 32	9	1,000	95%	92%	102-2180-ND		5.69	5.44	V7809-1000R
	15 - 32	12	1,000	95%	94%	102-2181-ND		5.69	5.44	V7812-1000R
V78xx-1500R Series, Right Angle										
3	4.75 - 18	2.5	1,500	88%	85%	102-2182-ND		7.62	7.29	V7802-1500R
	4.75 - 18	3.3	1,500	91%	88%	102-2183-ND		7.62	7.29	V7803-1500R
	6.5 - 18	5	1,500	93%	91%	102-2184-ND		7.62	7.29	V7805-1500R
	8 - 18	6.5	1,500	95%	93%	102-2185-ND		7.62	7.29	V7806-1500R
V78xx-2000R Series, Right Angle										
3	4.75 - 18	2.5	2,000	85%	83%	102-2186-ND		8.38	8.02	V7802-2000R
	4.75 - 18	3.3	2,000	87%	86%	102-2187-ND		8.38	8.02	V7803-2000R
	7 - 18	5	2,000	91%	88%	102-2188-ND		8.38	8.02	V7805-2000R
	8.5 - 18	6.5	2,000	92%	91%	102-2189-ND		8.38	8.02	V7806-2000R

† Tape Cut \$ ‡ Tape and Reel

3 Watt VAWQ3, 6 Watt VAWQ6 and 12 Watt VAWQ12 Series

Designed to convert a wide input voltage range into an isolated regulated voltage, the VAWQ Series is well suited for data transfer equipment, battery operated equipment, distributed power systems, mix analog/digital systems, remote control systems and industrial robot systems. **Features:** • 4:1 input (12V input and a 24V input converter in one) • 3000VDC isolation (can be used in some medical applications) • Industry standard 24-pin DIP packaging.



Pin	Function		Pin	Function	
	Single Output	Dual Output		Single Output	Dual Output
1	NP	NP	1,24	NP	NP
2	-Vin	-Vin	2,3	-Vin	-Vin
3	-Vin	-Vin	4,5	NP	NP
5	NP	NP	9	NC	Common
9	NC	Common	10,15	NC	NC
10	NC	NC	11	NC	-Vout
11	NC	-Vout	12,13	NP	NP
12	NP	NP	14	+Vout	+Vout
13	NP	NP	16	-Vout	Common
14	+Vout	+Vout	20,21	NP	NP
15	NC	NC	22,23	+Vin	+Vin
16	-Vout	Common			
22	+Vin	+Vin			
23	+Vin	+Vin			
24	NP	NP			

Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Minimum Load (mA)	Digi-Key Part No.	Price Each 1	Price Each 10	CUI Part No.
VAWQ3 Series - Single Output							
9 - 36	3.3	600	15	102-1311-ND	14.75	14.10	VAWQ3-Q24-S3R3H
	5	600	15	102-1312-ND	14.75	14.10	VAWQ3-Q24-S5H
	12	250	15	102-1313-ND	14.75	14.10	VAWQ3-Q24-S12H
	15	200	15	102-1836-ND	14.75	14.10	VAWQ3-Q24-S15H
18 - 72	3.3	600	7.5	102-1838-ND	14.75	14.10	VAWQ3-Q48-S3R3H
	5	600	7.5	102-1839-ND	14.75	14.10	VAWQ3-Q48-S5H
	12	250	7.5	102-1840-ND	14.75	14.10	VAWQ3-Q48-S12H
	15	200	7.5	102-1841-ND	14.75	14.10	VAWQ3-Q48-S15H
VAWQ3 Series - Dual Output							
9 - 36	±5	±300	25	102-1837-ND	16.91	16.17	VAWQ3-Q24-D5H
	±12	±125	25	102-1314-ND	16.91	16.17	VAWQ3-Q24-D12H
	±15	±100	25	102-1315-ND	16.91	16.17	VAWQ3-Q24-D15H
18 - 72	±5	±300	12	102-1842-ND	16.91	16.17	VAWQ3-Q48-D5H
	±12	±125	12	102-1843-ND	16.91	16.17	VAWQ3-Q48-D12H
	±15	±100	12	102-1844-ND	16.91	16.17	VAWQ3-Q48-D15H
VAWQ6 Series - Single Output							
9 - 36	3.3	1,000	15	102-1316-ND	19.41	18.56	VAWQ6-Q24-S3R3H
	5	1,000	15	102-1317-ND	19.41	18.56	VAWQ6-Q24-S5H
	12	470	15	102-1318-ND	19.41	18.56	VAWQ6-Q24-S12H
	15	400	15	102-1845-ND	19.41	18.56	VAWQ6-Q24-S15H
18 - 72	3.3	1,000	7.5	102-1847-ND	19.41	18.56	VAWQ6-Q48-S3R3H
	5	1,000	7.5	102-1848-ND	19.41	18.56	VAWQ6-Q48-S5H
	12	470	7.5	102-1849-ND	19.41	18.56	VAWQ6-Q48-S12H
	15	400	7.5	102-1850-ND	19.41	18.56	VAWQ6-Q48-S15H
VAWQ6 Series - Dual Output							
9 - 36	±5	±500	25	102-1846-ND	21.54	20.60	VAWQ6-Q24-D5H
	±12	±230	25	102-1319-ND	21.54	20.60	VAWQ6-Q24-D12H
	±15	±190	25	102-1320-ND	21.54	20.60	VAWQ6-Q24-D15H
18 - 72	±5	±500	12	102-1851-ND	21.54	20.60	VAWQ6-Q48-D5H
	±12	±230	12	102-1852-ND	21.54	20.60	VAWQ6-Q48-D12H
	±15	±190	12	102-1853-ND	21.54	20.60	VAWQ6-Q48-D15H
VAWQ12 Series - Single Output							
9 - 36	3.3	3,500	55	102-1854-ND	28.81	27.55	VAWQ12-Q24-S3R3
	5	2,400	55	102-1855-ND	28.81	27.55	VAWQ12-Q24-S5
	12	1,000	25	102-1856-ND	28.81	27.55	VAWQ12-Q24-S12
	15	800	25	102-1857-ND	28.81	27.55	VAWQ12-Q24-S15
18 - 75	3.3	3,500	20	102-1858-ND	28.81	27.55	VAWQ12-Q48-S3R3
	5	2,400	20	102-1859-ND	28.81	27.55	VAWQ12-Q48-S5
	12	1,000	10	102-1860-ND	28.81	27.55	VAWQ12-Q48-S12
	15	800	10	102-1861-ND	28.81	27.55	VAWQ12-Q48-S15

Digital DC-DC POL Converter — Novum NDM1 Series

Features: Auto-control™ Technology • Automatic adjustment of control loop compensation • Superior transient response
Precise Power Conversion: • 8.5VDC - 14VDC input • Programmable output • 10mV set point accuracy
Power Management: • Voltage sequencing • Voltage margining • Synchronize controllers for multiphase operation • Programmable soft start and soft stop • Pre-bias start-up • High reliability non-volatile OTP memory to 125°C
PMBus Compliant
Kit Features: The NDM1DEMO is an easy-to-use demo kit for the Novum 12A and 25A digital DC-DC POL modules.
Kit Includes: • One 12A demo board • One 25A demo board • USB Interface Adapter • Wall plug adapter • Access to V-Infinity Intelligence Center GUI

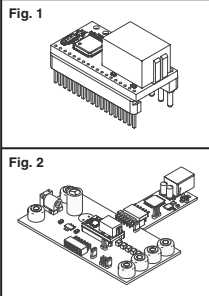
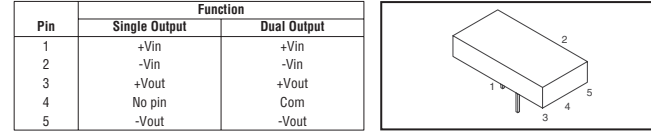


Fig.	Input Voltage (VDC)		Output Volt. (VDC)	Output Current (A)		Digi-Key Part No.	Price Each 1	Price Each 10	CUI Part No.
	Nom.	Range (VDC)		Max. (A)	Min. (A)				
1	12	8.5 - 14	0.6 - 2.5	12	0	102-2140-ND	18.86	18.03	NDM1-12-120
	12	8.5 - 14	0.6 - 2.5	25	0	102-2141-ND	23.93	22.88	NDM1-25-120
2	NDM1 Demonstration Kit					102-2142-ND	123.19	—	NDM1 KIT

10 Watt PTK10 Series

Features: • Industry standard pin out • Wide 4:1 input range • Fully isolated • Over-current protection • Over-voltage protection • Six-sided EMI shielding • Constant switching frequency • High efficiency • Compact size (2.0" x 1.0" x 0.4") • 3 year warranty



Input Voltage (VDC)	Output Voltage (VDC)	Output Current Max. (A)	Digi-Key Part No.	Price Each		CUI Part No.
				1	10	
Single Output						
10-36	3.3	2.4	102-1070-ND	26.53	25.36	PTK10-Q24-S3
	5	2.0	102-1071-ND	26.53	25.36	PTK10-Q24-S5
	12	0.9	102-1072-ND	26.53	25.36	PTK10-Q24-S12
	15	0.7	102-1230-ND	26.53	25.36	PTK10-Q24-S15
20-72	3.3	2.4	102-1073-ND	26.53	25.36	PTK10-Q48-S3
	5	2.0	102-1074-ND	26.53	25.36	PTK10-Q48-S5

(Continued)

Digi-Reel® Most SMT cutdown parts are