



Higher Power DC/DC



BE15 Series: • 15W output in one square inch of board area • Isolated DC/DC converter family offers efficient regulated DC power for printed circuit board mounting • Includes fully magnetic and optical isolation with Basic protection up to 2250VDC (Q48 models) and 200VDC (Q12 models) • Usable -40°C – 85°C Temperature Range (with derating) • Extensive self-protection shut down features • Meets UL60950-1, CAN/CSA-C22.2 No. 60950-1, IEC60950-1, EN60950-1 safety approvals

HPH Series: • Industry-standard package/pinout • Remote sense, trim, On/Off control • High efficiency: up to 91% • Designed to meet UL/EN/IEC 60950-1, CAN/CSA-C22.2 No. 60950-1 • CE mark

HPQ Series: • High efficiency synchronous rectifier topology • Operating temperature: -40°C – 85°C, with no heat sink required • Designed to meet UL/EN 60950-1, CSA-C22.2 No. 60950-1

LSM2 Series: • Fully compatible with Distributed-power Open Standards Alliance specification • Quick transient response (to 25μ sec.) and very fast current slew rates (to 20A/μsec). *LSM2-T/30 Series:* D12 series DC/DC converters offer up to 30A continuous output power with a user-selectable output of 0.8–3.6V. 25A output is available up to 5Vout.

LSN Series: These are ideal building blocks for emerging, on-board power-distribution schemes in which isolated 12V buses deliver power to any number of non-isolated, step-down buck regulators.

LSN2 Series: These miniature point-of-load (POL) switching DC/DC converters are ideal regulation and supply elements for distributed power and intermediate bus architectures.

LSS Series: Vertical SIP-mount small footprint package • Outstanding thermal performance and derating • On/Off control and trim functions • High efficiency up to 93% with no heatsink • Fully protected against temperature and voltage limits • Designed to meet UL/IEC/EN 60950-1 • Qual/HAL/EMI testing is scheduled

UCE Series: • Low profile 0.4" height with 0.9" x 2.3" outline dimensions • Designed to meet UL/EN/IEC 60950-1 and CAN/CSA C22.2 No. 60950-1

UCH Series: • Standard "half-brick" configuration • Designed to meet UL/EN60950-1 (BASIC insulation) • Output current limiting and short-circuit protection • On/Off, VOUT trim and sense functions

UCQ Series: • Interleaved synchronous-rectifier topology; Ultra high efficiency, No output reverse conduction • Outstanding thermal performance • On/Off control, trim and sense functions • Fully isolated, 2250VDC (BASIC) • Output over voltage protection • Designed to meet UL/EN/IEC60950-1 • Qual/HAL/EMI tested

UE125-120 Series: • Small footprint DC/DC converter, ideal for high current applications • Isolation up to 2250VDC (basic) • Up to 25W total output power with overtemperature shutdown • High efficiency synchronous rectifier forward topology • Stable operation with no required external components • Usable -40°C – 85°C Temperature Range (with derating)

• Meets UL60950-1, CAN/CSA-C22.2 No. 60950-1, IEC60950-1, EN60950-1 safety approvals (2nd edition) • Extensive self-protection shut down features

ULS Series: • Small footprint DC/DC converter, ideal for high current applications • Industry standard DOSA "brick" format and pinout • 2250VDC Basic input/output isolation (48V models) • Up to 66W total output power with overtemperature shutdown • High efficiency synchronous rectifier forward topology • Stable no-load operation with no required external components • Operating Temperature Range: -40°C – 85°C with derating • UL60950-1, CSA-C22.2 No. 234, EN60950-1 safety approvals, 2nd Edition (pending) • Extensive self-protection shut down features

UQO Series: • Interleaved synchronous-rectifier topology; Ultra high efficiency, No output reverse conduction • Outstanding thermal performance • On/Off control, trim and sense functions • Fully isolated, up to 2250VDC (BASIC) • Output over voltage protection • Fully I/O protected; Thermal shutdown • UL/EN/IEC60950-1

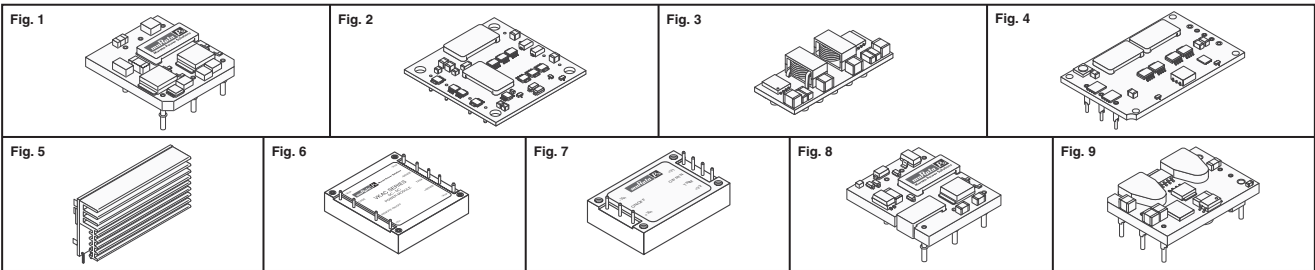
UWE Series: • Fixed output from 3.3 – 24VDC up to 75W • Synchronous rectification yields very high efficiency and low power dissipation • Operating Temperature Range from -40°C – 85°C with derating • Up to 1500VDC (basic insulation) • Outstanding thermal performance and derating • Extensive self-protection, overtemperature and overload features with no output reverse conduction • On/Off control, trim and remote sense functions • Meets UL/EN/IEC 60950-1, CAN/CSA-C22.2 No. 60950-1 safety approvals and FCC RFI/EMI certification • Pre-bias operation for startup protection

VCN Series: • Supports Double Data Rate SDRAM specifications DDR1, 2, 3 and similar requirements • Programmable output voltage • Soft start circuit • Over-voltage protection • Over-current protection • Over-temperature protection • Differential remote sense • Power good signal • Output enable • High efficiency • "1U" height • Pre-bias turn on • Fused input

VKA Series: • 33-75V Input range • 100μs Transient response 50-100% Load step • 420kHz Fixed-frequency operation • Remote sense • Operation to 100°C base plate temperature • Primary remote On/Off, choice of positive/negative logic • Adjustable output voltage • Continuous short-circuit protection • Thermal shutdown • Case ground pin

VKP Series: • 18-40V and 33-75V Input range • Each channel independently current limited • High efficiency: 87% typical • Excellent cross regulation • 1500VDC Isolation between Input and Output • Fixed frequency operation • Operation to 100°C base plate temperature • 50μs Transient recovery • Primary and secondary remote On/Off • Adjustable output voltage • External synchronization

VXS Series: These are dual output converters with 18-36VDC and 5VDC outputs. The industry quarter-pak size of 2.3" x 1.5" x 0.5" coupled with 90% efficiency is an industry high-density breakthrough.



VOUT (V)	IOUT (A)	Power (W)	On/Off Control Polarity	Digi-Key Part No.	Tube Price Each	Murata Power Solutions Part No.
Fig. 1 — BE15 Series - Isolated Wide Input Bipolar						
±5	1.5V	15	Negative	811-2180-5-ND	30.81 29.91 29.46	BE15-050-012N-C
±5	1.5V	15	Positive	811-2181-5-ND	30.33 29.45 29.00	BE15-050-012P-C
±5	1.5V	15	Negative	811-2182-5-ND	30.33 29.45 29.00	BE15-050-048N-C
±5	1.5V	15	Positive	811-2183-5-ND	30.81 29.91 29.46	BE15-050-048P-C
±12	6.25V	15	Negative	811-2184-5-ND	30.81 29.91 29.46	BE15-120-012N-C
±12	6.25V	15	Positive	811-2185-5-ND	30.33 29.45 29.00	BE15-120-012P-C
±12	6.25V	15	Negative	811-2186-5-ND	30.33 29.45 29.00	BE15-120-048N-C
±12	6.25V	15	Positive	811-2187-5-ND	30.81 29.91 29.46	BE15-120-048P-C
±15	5.0V	15	Negative	811-2188-5-ND	30.81 29.91 29.46	BE15-150-012N-C
±15	5.0V	15	Positive	811-2189-5-ND	30.33 29.45 29.00	BE15-150-012P-C
±15	5.0V	15	Negative	811-2190-5-ND	30.33 29.45 29.00	BE15-150-048N-C
±15	5.0V	15	Positive	811-2191-5-ND	30.81 29.91 29.46	BE15-150-048P-C
Fig. 2 — HPH Series - Isolated, Half-Brick						
3.3	70V	231	Negative	811-1754-5-ND	83.50 81.05 79.82	HPH-3.3/70-D48NB-C
5.0	40V	200	Negative	811-1755-5-ND	80.41 78.05 76.86	HPH-5/40-D48NB-C
12	30V	360	Negative	811-1753-5-ND	82.17 79.76 78.55	HPH-12/30-D48NB-C
Fig. 2 — HPQ Series - Isolated, High Power Quarter-Brick						
3.3	50V	165	Negative	811-1756-5-ND	73.29 71.14 70.07	HPQ-3.3/50-D48NB-C
Fig. 3 — LSM2 Series - Single Output, Non-Isolated, POL						
0.75 - 3.3	6	19.8	Positive	811-1781-1-ND†	19.31 18.26 16.86	LSM2-T/6-W3-C
0.75 - 3.3	6	19.8	Positive	811-1781-2-ND†	1843.24/150	LSM2-T/6-W3-C
0.75 - 3.3	6	19.8	Negative	811-1782-1-ND†	19.31 18.26 16.86	LSM2-T/6-W3N-C
0.75 - 3.3	6	19.8	Negative	811-1782-2-ND†	1843.24/150	LSM2-T/6-W3N-C
0.75 - 5.0	6	30	Positive	811-1783-1-ND†	19.31 18.26 16.86	LSM2-T/6-D12-C
0.75 - 5.0	6	30	Positive	811-1783-2-ND†	1843.24/150	LSM2-T/6-D12-C
0.75 - 5.0	6	30	Negative	811-1784-1-ND†	19.31 18.26 16.86	LSM2-T/6-D12N-C
0.75 - 5.0	6	30	Negative	811-1784-2-ND†	1843.24/150	LSM2-T/6-D12N-C
0.75 - 3.3	10	33	Positive	811-1785-1-ND†	29.53 27.93 25.78	LSM2-T/10-W3-C
0.75 - 3.3	10	33	Positive	811-1785-2-ND†	2819.07/150	LSM2-T/10-W3-C
0.75 - 3.3	10	33	Negative	811-1786-1-ND†	29.53 27.93 25.78	LSM2-T/10-W3N-C
0.75 - 3.3	10	33	Negative	811-1786-2-ND†	2819.07/150	LSM2-T/10-W3N-C
0.75 - 5.0	10	50	Positive	811-1787-1-ND†	29.53 27.93 25.78	LSM2-T/10-D12-C
0.75 - 5.0	10	50	Positive	811-1787-2-ND†	2819.07/150	LSM2-T/10-D12-C
0.75 - 3.3	16	52.8	Positive	811-1788-1-ND†	30.67 29.00 26.77	LSM2-T/16-W3-C
0.75 - 3.3	16	52.8	Positive	811-1788-2-ND†	2927.49/150	LSM2-T/16-W3-C
0.75 - 3.3	16	52.8	Negative	811-1789-1-ND†	30.67 29.00 26.77	LSM2-T/16-W3N-C
0.75 - 3.3	16	52.8	Negative	811-1789-2-ND†	2927.49/150	LSM2-T/16-W3N-C
0.75 - 5.0	16	80	Positive	811-1790-1-ND†	30.67 29.00 26.77	LSM2-T/16-D12-C
0.75 - 5.0	16	80	Positive	811-1790-2-ND†	2927.49/150	LSM2-T/16-D12-C
0.8 - 5.0	30	125	—	811-1792-ND§	21.69 21.05 20.73	LSM2-T/30-D12-C
0.8 - 5.0	30	125	—	811-1793-ND§	22.57 21.91 21.58	LSM2-T/30-D12N-C
Fig. 3 — LSN Series - Non-Isolated, Single Output						
0.75 - 5.25	10	51	Positive	811-1807-5-ND	17.55 17.04 16.79	LSN-T/10-D12-C
0.75 - 5.25	10	51	Negative	811-1808-5-ND	17.55 17.04 16.79	LSN-T/10-D12N-C
0.75 - 5.0	16	80V	—	811-1809-5-ND	17.91 17.38 17.12	LSN-T/16-D12N-C
0.75 - 3.3	16	52.8	—	811-1810-5-ND	17.91 17.38 17.12	LSN-T/16-W3-C
Fig. 3 — LSM2 Series - Non-Isolated, DOSA-SIP						
0.75 - 3.3	6	19.8	Positive	811-1794-ND††	10.53 10.23 10.07	LSM2-T/6-W3-C
0.75 - 3.3	6	19.8	Negative	811-1795-ND††	10.53 10.23 10.07	LSM2-T/6-W3N-C
0.75 - 5.0	6	30	Positive	811-1796-ND††	10.53 10.23 10.07	LSM2-T/6-D12-C
0.75 - 5.0	6	30	Negative	811-1797-ND††	10.53 10.23 10.07	LSM2-T/6-D12N-C
0.75 - 3.3	10	33	Positive	811-1798-ND††	17.55 17.04 16.79	LSM2-T/10-W3-C

VOUT (V)	IOUT (A)	Power (W)	On/Off Control Polarity	Digi-Key Part No.	Tube Price Each	Murata Power Solutions Part No.
Fig. 4 — LSS Series - Non-Isolated, SIP-mount, Adjustable Output						
0.75 - 3.3	10	33	Negative	811-1799-ND††	17.55 17.04 16.79	LSN2-T/10-W3N-C
0.75 - 5.0	10	50	Positive	811-1800-ND††	17.55 17.04 16.79	LSN2-T/10-D12-C
0.75 - 5.0	10	50	Negative	811-1801-ND††	17.55 17.04 16.79	LSN2-T/10-D12N-C
0.75 - 3.3	16	52.8	Positive	811-1802-5-ND	18.96 18.41 18.13	LSN2-T/16-W3-C
0.75 - 3.3	16	52.8	Negative	811-1803-5-ND	18.96 18.41 18.13	LSN2-T/16-W3N-C
0.75 - 5.0	16	80	Positive	811-1804-5-ND‡	18.96 18.41 18.13	LSN2-T/16-D12-C
0.75 - 5.0	16	80	Negative	811-1805-5-ND‡	18.96 18.41 18.13	LSN2-T/16-D12N-C
0.8 - 5.0	30	150	—	811-1806-5-ND	21.69 21.05 20.73	LSN2-T/30-D12-C
Fig. 4 — UCE Series - Isolated, High Density, Eighth-Brick						
0.591 - 6.0	10V	60	—	811-1811-ND††	10.19 9.89 9.74	LSS-T/10-W12-C
Fig. 4 — UCH Series - Isolated, Half-Brick						
1.5	20	30	Negative	811-1832-5-ND	55.97 54.32 53.50	UCE-1.5/20-D48NB-C
3.3	15	49.5	Negative	811-1837-5-ND	55.97 54.32 53.50	UCE-3.3/15-D48NB-C
3.3	30	99	Negative	811-1839-5-ND	59.08 57.35 56.48	UCE-3.3/30-D48NB-C
12	4.2	50.4	Negative	811-1834-5-ND	55.97 54.32 53.50	UCE-12/4.2-D48NB-C
12	10	120	Negative	811-2210-5-ND	63.52 61.66 60.72	UCE-12/10-D48NB-C
12	10	120	Negative	811-2211-5-ND	56.19 54.54 53.71	UCE-12/10-D48N-C
Fig. 4 — UCQ Series - Isolated, Low-Profile Single Output Quarter-Brick						
1.8	40	72	Negative	811-1839-5-ND	67.53 65.55 64.55	UCH-1.8/40-D48NB-C
2.5	40	100	Negative	811-1843-5-ND	67.53 65.55 64.55	UCH-2.5/40-D48NB-C
3.3	10	33	Positive	811-1844-5-ND	60.85 59.07 58.17	UCH-3.3/10-D24PB-C
3.3	10	33	Negative	811-1845-5-ND	59.09 57.35 56.48	UCH-3.3/10-D48NB-C
3.3	15	49.5	Negative	811-1846-5-ND	61.75 59.94 59.03	UCH-3.3/15-D48NB-C
3.3	30	99	Negative	811-1847-5-ND	64.41 62.51 61.57	UCH-3.3/30-D48NB-C
3.3	35	115.5	Positive	811-1848-5-ND	66.19 64.24 63.27	UCH-3.3/35-D24PB-C
5.0	10	50	Positive	811-1849-5-ND	61.75 59.94 59.03	UCH-5/10-D48NB-C
5.0	20	100	Positive	811-1850-5-ND	66.19 64.24 63.27	UCH-5/20-D24PB-C
5.0	30	150	Negative	811-1851-5-ND	67.53 65.54 64.55	UCH-5/30-D48NB-C
12	4.2	50.4	Negative	811-1841-5-ND	61.75 59.94 59.04	UCH-12/4.2-D48NB-C
12	12.5	150	Negative	811-1840-5-ND	69.29 67.26 66.24	UCH-12/12.5-D48NB-C
15	6.7	100.5	Negative	811-1842-5-ND	69.29 67.26 66.24	UCH-15/6.7-D48NB-C
Fig. 8 — UE125-120 Series - Isolated, Single Output DC/DC						
1.2	30	36	Negative	811-1852-5-ND	62.19 60.36 59.45	UCO-1.2/30-D48NB-C
1.5	25	37.5	Negative	811-1853-5-ND	62.19 60.36 59.45	UCO-1.5/25-D48NB-C
1.5	40	60	Negative	811-1854-5-ND	57.30 55.62 54.77	UCO-1.5/40-D48NB-C
1.8	30	54	Negative	811-1855-5-ND	62.19 60.37 59.45	UCO-1.8/30-D48NB-C
2.5	30	75	Negative	811-1857-5-ND	62.19 60.36 59.45	UCO-2.5/30-D48NB-C
2.5	40	100	Positive	811-1858-5-ND	66.19 64.24 63.27	UCO-2.5/40-D24PB-C
3.3	20	66	Negative	811-1859-5-ND	56.42 54.76 53.93	UCO-3.3/20-D48NB-C
3.3	30	99	Negative	811-1860-5-ND	59.09 57.35 56.48	UCO-3.3/30-D48NB-C
3.3	35	115.5	Positive	811-1861-5-ND	62.51 60.08 58.87	UCO-3.3/35-D24PB-C
5.0	20	100	Positive	811-1862-5-ND	60.85 59.07 58.17	UCO-5/20-D24PB-C
5.0	20	100	Negative	811-1863-5-ND	59.08 57.35 56.48	UCO-5/20-D48NB-C
12	8.3	99.6	Negative	811-1856-5-ND	59.08 57.35 56.48	UCO-12/8.3-D48NB-C
Fig. 9 — ULS Series - Isolated, Sixteen-Brick						
3	7.5	25	Negative	811-2224-ND	22.75 22.09 21.75	ULS-3/7.5-D48N-C
5	5	25	Negative	811-2223-ND	23.22 22.54 22.20	ULS-5/5-D48N-C
12	2.1	25.2	Negative	811-2222-ND	22.75 22.09 21.75	ULS-12/2.1-D48N-C
3.3	20	66	Negative	811-2197-ND	31.52 30.59 30.13	ULS-3.3/20-D48N-C
12	5	60	Negative	811-2198-ND	31.52 30.59 30.13	ULS-12/5-D48N-C
5	12	60	Negative	811-2199-ND	31.52 30.59 30.13	ULS-5/12-D48N-C

† Full power continuous output requires baseplate installation † Maximum † Cut Tape ‡ Tape and Reel
 § Efficiencies are shown at 5Vout § Bulk †† Tray (Continued)

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.