



Typical unit

**FEATURES**

- iLGA inspectable Land Grid Array
- 4.5-14Vdc input voltage range
- Programmable output voltage from 0.69-5.5Vdc
- Drives 1000µF ceramic capacitive loads
- High power conversion efficiency at 94%
- Outstanding thermal derating performance
- Over temperature and over current protection
- On/Off control and Power Good output
- RoHS-6 hazardous substance compliance
- Tracking operation/Synchronized function

**PRODUCT OVERVIEW**

The OKL2-T/20-W12 series are non-isolated point-of-Load (PoL) DC-DC power converters for embedded applications. The tiny form factor is configured on a Land Grid Array (LGA) assembly measuring only 1.3 x 0.53 x 0.34 inches (33.02 x 13.46 x 8.75 mm). Applications include powering CPUs, datacom/telecom systems, distributed bus architectures (DBA), programmable logic and mixed voltage systems.

The wide input range is 4.5 to 14Volts DC.

The maximum output current is 20Amps. Based on fixed-frequency synchronous buck converter switching topology, the high power conversion efficient Point of Load (PoL) module features programmable output voltage and On/Off control.

These converters also include under voltage lock out (UVLO), output short circuit protection, over-current and over temperature protections.

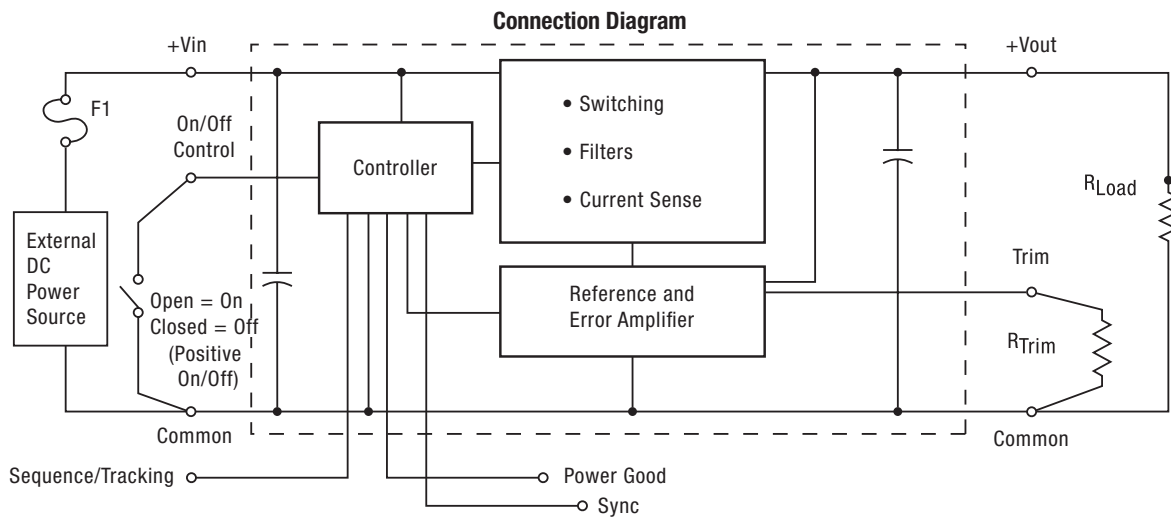


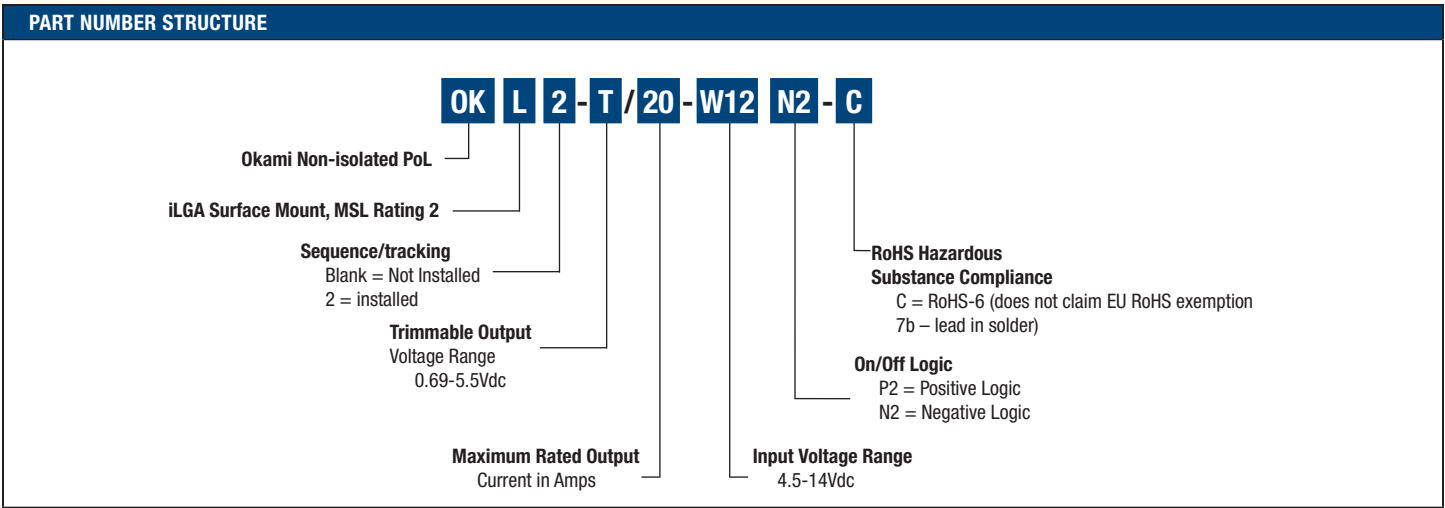
Figure 1. OKL2-T/20-W12

Note: Murata Power Solutions strongly recommends an external input fuse, F1. See specifications.



PERFORMANCE SPECIFICATIONS SUMMARY AND ORDERING GUIDE														
Model Number	Output						Input				Efficiency (%)		On/Off Logic	Dimensions
	Vout (Volts) ①	Iout (Amps, max.) ②	Power (Watts)	R/N (mV p-p) Max. ④	Regulation (max.)		Vin nom. (Volts)	Range (Volts) ④	Iin, no load (mA) ④	Iin, full load (Amps) ②	Min.	Typ.		Inches (mm)
					Line	Load							Pos.	
OKL2-T/20-W12P2-C	0.69-5.5	20	100	35	±0.4%	±0.3%	12	4.5-14	75	8.87	91.0	94.0	1.3 x 0.53 x 0.34	
OKL2-T/20-W12N2-C													Neg.	(33.02 x 13.46 x 8.75)

- ① The output range is limited by Vin. See detailed specs.
- ② All specifications are at nominal line voltage, Vout=nominal (5V) and full load, +25°C. unless otherwise noted.  
Output capacitors are 188 µF ceramic. Input cap is 44 µF. See tailed specifications. I/O caps are necessary for our test equipment and may not be needed for your application.
- ③ Use adequate ground plane and copper thickness adjacent to the converter.
- ④ Ripple and Noise (R/N) and no-load input current are shown at Vout=1.8V. See specs for details.



**Product Label**

Because of the small size of these products, the product label contains a character-reduced code to indicate the model number and manufacturing date code. Not all items on the label are always used. Please note that the label differs from the product photograph. Here is the layout of the label:

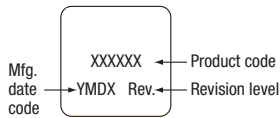


Figure 2. Label Artwork Layout

The label contains two rows of information:

- First row – Model number product code (see table)
- Second row – Manufacturing date code and revision level

Model Number	Product Code
OKL2-T/20-W12P2-C	L21120
OKL2-T/20-W12N2-C	L20120

The manufacturing date code is four characters:

- First character – Last digit of manufacturing year, example 2009
- Second character – Month code (1 through 9 = Jan-Sep; O, N, D = Oct, Nov, Dec)
- Third character – Day code (1 through 9 = 1 to 9, 10 = 0 and 11 through 31 = A through Z)
- Fourth character – Manufacturing information