

Typical unit

PRODUCT OVERVIEW

The OKR-T/3 series are miniature SIP non-isolated Point-of-Load (PoL) DC/DC power converters measuring only 0.41 x 0.65 x 0.4 inches (10.4 x 16.5 x 10.2 mm). The wide input range is 4.5 to 14 Volts DC. Based on 600 KHz synchronous buck topology, the high power conversion efficient Point of Load (PoL) module features programmable output voltage and On/Off control, under voltage lock out (UVLO), overcurrent and over temperature protections. These units are designed to meet all standard UL/EN/ IEC 60950-1 safety and FCC EMI/RFI emissions certifications and RoHS-6 hazardous substance compliance.

FEATURES

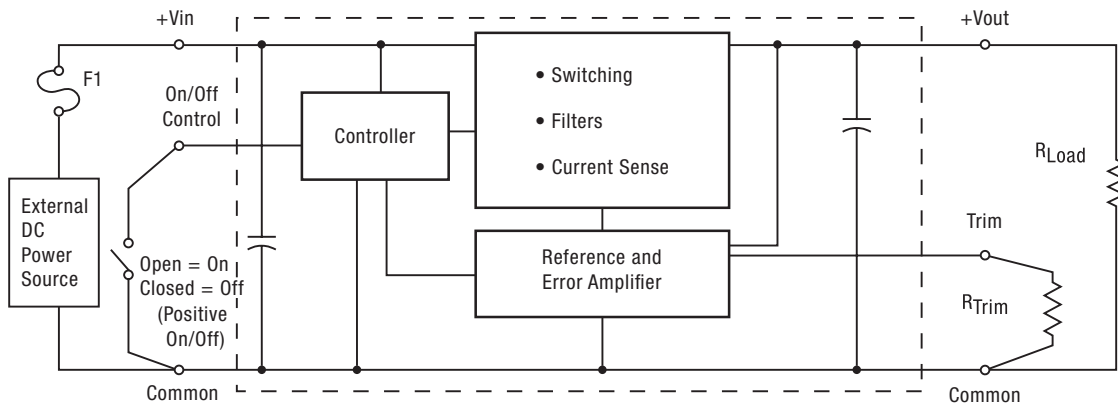
- 600 KHz operation
- 4.5-14 Vdc input voltage range
- Programmable output voltage from 0.591-6.0 VDC
- Drives up to 200 μF ceramic capacitive loads
- High power conversion efficiency at 93%
- Outstanding thermal derating performance
- Over temperature and over current protection
- On/Off control
- SIP, 0.41 x 0.65 x 0.4 inches (10.4 x 16.5 x 10.2 mm).
- Designed to meet UL/EN/IEC 60950-1 safety (pending)
- RoHS-6 hazardous substance compliance

Contents of full data sheet

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Figure 1. Simplified Block Diagram



Performance Specifications and Ordering Guide

ORDERING GUIDE														
Root Model	Output						Input				Efficiency		Package	
	V _{OUT} (Volts)	I _{OUT} (Amps max)	Power (Watts)	R/N (mVp-p)	Regulation (Max.)		V _{IN} Nom. (Volts)	Range (Volts)	I _{IN} , no load (mA)	I _{IN} , full load (Amps)	Min.	Typ.	Case	Pinout
				Max.	Line	Load								
OKR-T/3-W12-C	0.591-6	3	15	25	±0.3%	±1.4%	12	4.5-14	80	1.34	90.75%	93%	C72	P73
OKR-T/6-W12-C	0.591-6	6	Please contact Murata Power Solutions for further information.										C90	P73
OKR-T/10-W12-C	0.591-6	10											C90	P73

- ① Dimensions are in inches (mm).
- ② Ripple and Noise is shown at V_{OUT}=1V. See specs for details.
- ③ All specifications are at nominal line voltage, V_{OUT}= 5V and full load, +25 deg.C. unless

otherwise noted. Output capacitors are 1 µF ceramic and 10 µF electrolytic in parallel. Input cap is 22 µF. See detailed specifications. I/O caps are necessary for our test equipment and may not be needed for your application.

- ④ V_{IN} must be 2V or higher than V_{OUT} for 3.3 to 5V outputs.

PART NUMBER STRUCTURE

OK R - T / 3 - W12 - C

Okami Non-isolated PoL

SIP-Mount

Output Voltage Range
T = Trimmable, 0.591-6 Volts

Maximum Rated Output
Current in Amps

RoHS Hazardous Substance Compliance
C = RoHS-6 (does not claim EU RoHS exemption 7b-lead in solder)

Wide Input Voltage Range
W12 = 4.5 – 14 Volts

Note: Some model number combinations may not be available. Contact Murata Power Solutions for availability.

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 on page 1. Here is the layout of the label:

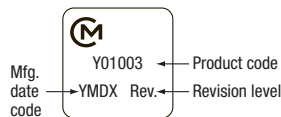


Figure 2. Label Artwork Layout

The label contains three rows of information:

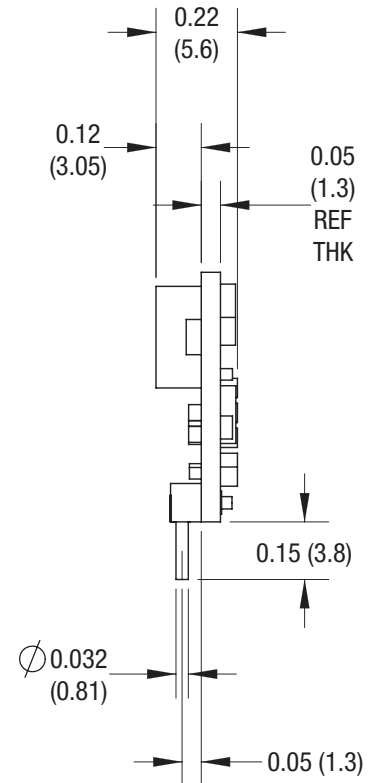
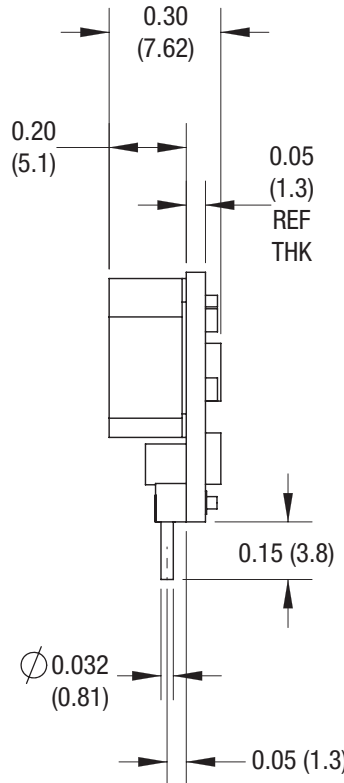
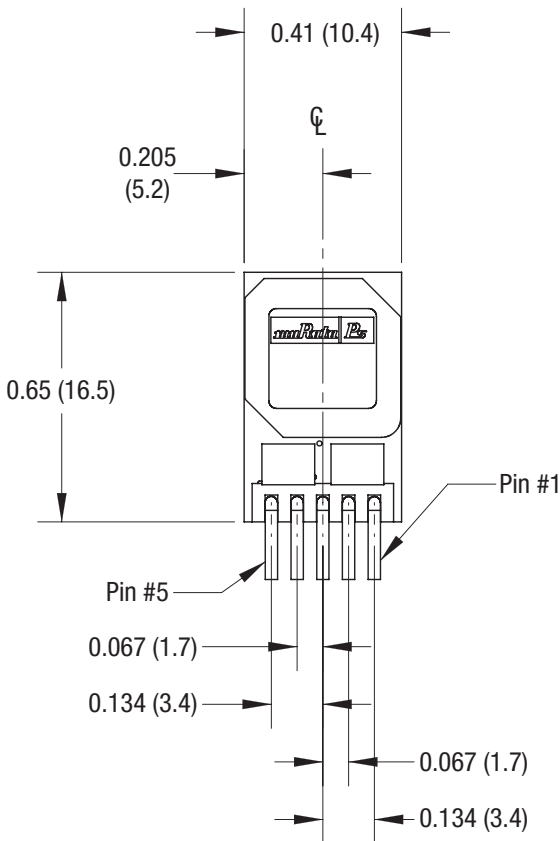
- First row – Murata Power Solutions logo
- Second row – Model number product code (see table)
- Third row – Manufacturing date code and revision level

Model Number	Product Code
OKR-T/3-W12-C	R01103
OKR-T/6-W12-C	R01106
OKR-T/10-W12-C	R01110

The manufacturing date code is four characters:

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

MECHANICAL SPECIFICATIONS



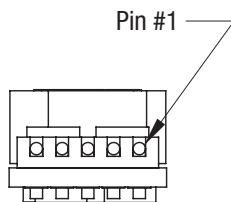
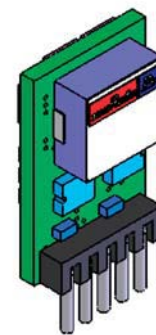
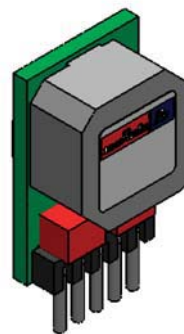
OKR-T/6

OKR-T/10

Case C90

OKR-T/3

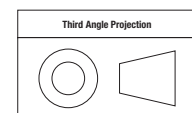
Case C72



Pin diameter: 0.032 (0.81)
 Tolerance: ±0.002 (±0.05)
 Pin material: Copper alloy
 Pin finish: Pure matte tin 100-300 μin.
 over 75-100 μin. nickel

Figure 2. OKR Series
 Component locations are typical.

Dimensions are in inches (mm shown for ref. only).



Tolerances (unless otherwise specified):
 .XX ± 0.02 (0.5)
 .XXX ± 0.010 (0.25)
 Angles ± 2°

Components are shown for reference only.

INPUT/OUTPUT CONNECTIONS OKR-T-W12	
Pin	Function P73
1	Remote On/Off Control
2	+VIN
3	Ground
4	+VOUT
5	Output Trim

