

FEATURES

- Non-isolated SIP POL DC/DC power module
- 8.3-14Vdc input voltage range
- Programmable output voltage from 0.7525-5.5Vdc
- 10 Amp (T/10) or 16 Amp (T/16) output current models
- Drives 1000 μ F ceramic capacitive loads
- High power conversion efficiency 94.5% at 3.3 Vout
- Outstanding thermal derating performance
- Over temperature and over current protection
- On/Off control, Sense and optional Sequence/Tracking input
- UL/EN/IEC 60950-1 safety
- Industry-standard (DOSA) SIP format
- RoHS-6 hazardous substance compliance

PRODUCT OVERVIEW

The OKX-T/10 and -T/16 series are miniature SIP non-isolated Point-of-Load (POL) DC/DC power converters for embedded applications. The module is fully compatible with Distributed-power Open Standards Alliance (DOSA) industry-standard specifications (www.dosapower.com). Applications include powering CPU's, datacom/telecom systems, programmable logic and mixed voltage systems.

The wide input range is 8.3 to 14 Volts DC. Two maximum output currents are offered, 10 Amps (T/10 models) or 16 Amps (T/16 models). 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. An optional Sequence/Tracking input allows controlled ramp-up and ramp-down outputs. The Sense input provides load compensation. These converters also include under voltage lock out (UVLO), output short circuit protection, over-current 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.

Connection Diagram

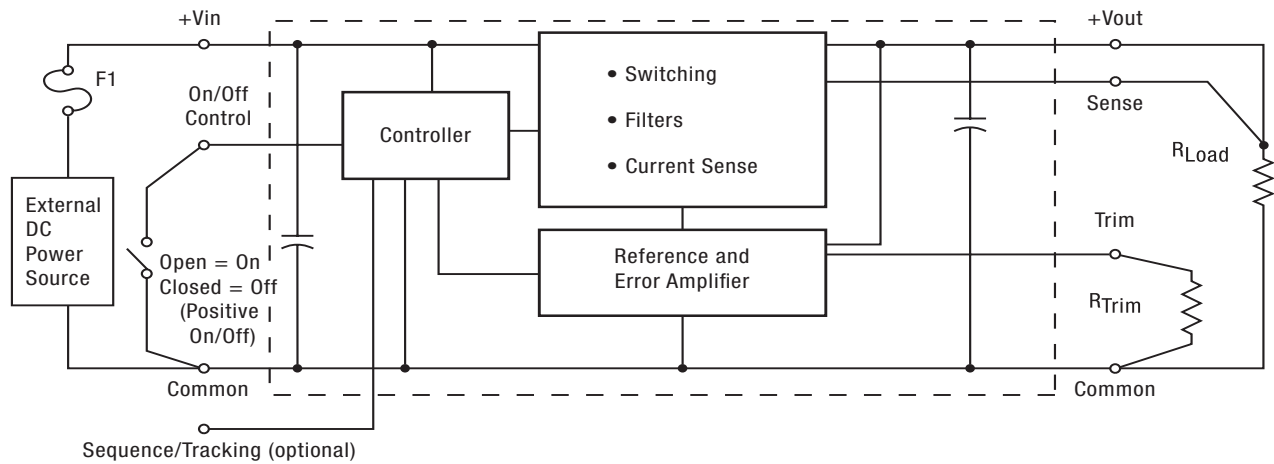


Figure 1. OKX2-T/10, -T/16

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



PERFORMANCE SPECIFICATIONS SUMMARY AND ORDERING GUIDE															
Model Number ②	Output						Input				Efficiency		On/Off Logic	Sequence/Tracking	Package C86, Pinout P84
	V _{out} (Volts)	I _{out} (Amps max)	Power (Watts)	R/N (mVp-p) Max. ④	Regulation (Max.)		Vin Nom. (Volts)	Range (Volts) ①	I _{in} , no load (mA)	I _{in} , full load (Amps)	Min.	Typ.			Case Dimensions are in inches (mm)
					Line	Load									
OKX-T/10-D12P-C	0.7525-5.5	10	50	40	±0.15%	±0.25%	12	8.3-14	80	4.41	93%	94.5%	Pos.	no	
OKX-T/10-D12N-C	0.7525-5.5	10	50	40	±0.15%	±0.25%	12	8.3-14	80	4.41	93%	94.5%	Neg.	no	2.0x0.5x0.37 (50.8x12.7x9.4)
OKX2-T/10-D12P-C	0.7525-5.5	10	50	40	±0.15%	±0.25%	12	8.3-14	80	4.41	93%	94.5%	Pos.	yes	2.0x0.5x0.37 (50.8x12.7x9.4)
OKX2-T/10-D12N-C	0.7525-5.5	10	50	40	±0.15%	±0.25%	12	8.3-14	80	4.41	93%	94.5%	Neg.	yes	2.0x0.5x0.37 (50.8x12.7x9.4)
OKX-T/10-D12PJ-C-CIS ⑤	0.7525-5.5	10	50	40	±0.15%	±0.25%	12	8.3-14	80	4.41	93%	94.5%	Pos.	no	2.0x0.5x0.38 (50.8x12.7x9.7)
OKX-T/16-D12P-C	0.7525-5.5	16	80	40	±0.15%	±0.25%	12	8.3-14	80	7.09	92.5%	94%	Pos.	no	2.0x0.5x0.37 (50.8x12.7x9.4)
OKX-T/16-D12N-C	0.7525-5.5	16	80	40	±0.15%	±0.25%	12	8.3-14	80	7.09	92.5%	94%	Neg.	no	2.0x0.5x0.37 (50.8x12.7x9.4)
OKX-T/16-D12PJ-C	0.7525-5.5	16	80	40	±0.15%	±0.25%	12	8.3-14	80	7.09	92.5%	94%	Pos.	no	2.0x0.5x0.37 (50.8x12.7x9.4)
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OKX2-T/16-D12N-C	0.7525-5.5	16	80	40	±0.15%	±0.25%	12	8.3-14	80	7.09	92.5%	94%	Neg.	yes	2.0x0.5x0.37 (50.8x12.7x9.4)

① The input voltage range must be 13.2 Volts max. for V_{out} >= 3.63 V.

② All specifications are at nominal line voltage, V_{out}=nominal (5V for D12 models) 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.

③ Use adequate ground plane and copper thickness adjacent to the converter.

④ Ripple and Noise (R/N) is shown at V_{out}=1V. See specs for details.

⑤ Please note and be aware that the mechanical drawing for this special model will be unique; see page 14.

PART NUMBER STRUCTURE

OK X 2 - T / 16 - D12 P J Lx - C

- Okami Non-isolated PoL**
- SIP Mount**
- Sequence/Tracking**
Blank = Not installed, delete pin 9
2 = Installed, add pin 9
- Trimtable Output Voltage Range**
D12 Models = 0.7525-5.5V
- Maximum Rated Output Current in Amps**
- Input Voltage Range**
D12 = 8.3-14V
- RoHS Hazardous Substance Compliance**
C = RoHS-6 (does not claim EU RoHS exemption 7b—lead in solder)
- Pin Length Option**
Blank = Standard pin length
L6 = Pin length 0.138 inches (3.5mm)*
- Reversed Pin Mounting (see pg. 4)**
J = Reversed Pins (special order)
Blank = Standard Pins
- On/Off Logic**
P = Positive Logic
N = Negative Logic

***Special quantity order is required; samples available with standard pin length only.**

Note:
Some model number combinations may not be available. See website or contact your local Murata sales representative.