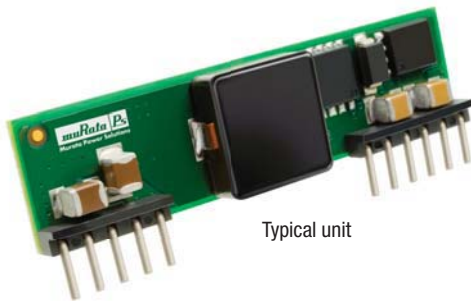




Okami™ OKX T/10 & T/16-D12 Series

Adjustable DOSA 10/16-Amp SIP DC/DC Converters



Typical unit

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.

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 µF 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

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Connection Diagram

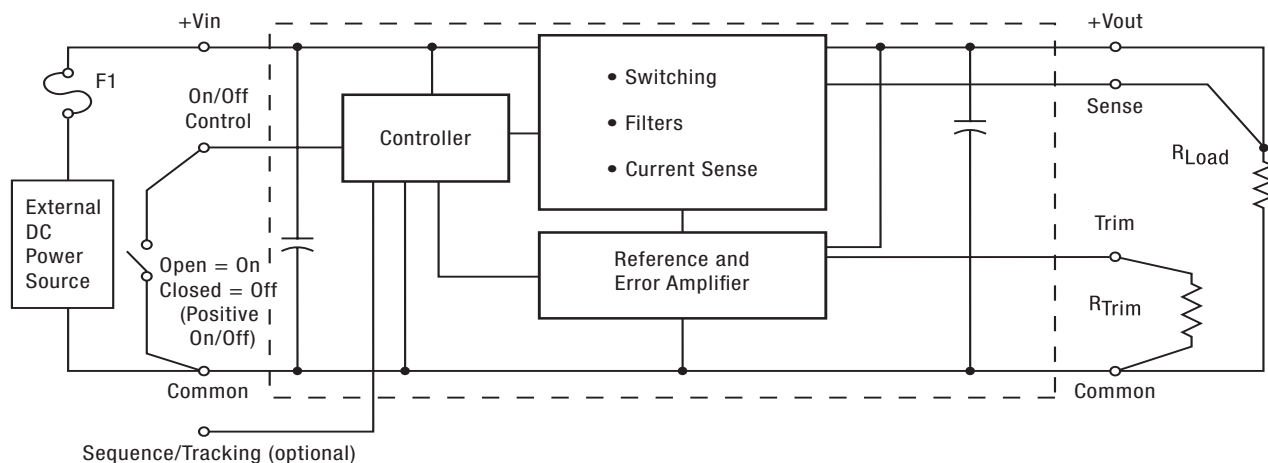


Figure 1. OKX2-T/10, -T/16

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



www.murata-ps.com

email: sales@murata-ps.com

Performance Specifications and Ordering Guide

ORDERING GUIDE															
Model Number ②	Output					Input					Efficiency		On/Off Polarity	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/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)
OKX2-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.	yes	2.0x0.5x0.37 (50.8x12.7x9.4)
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)

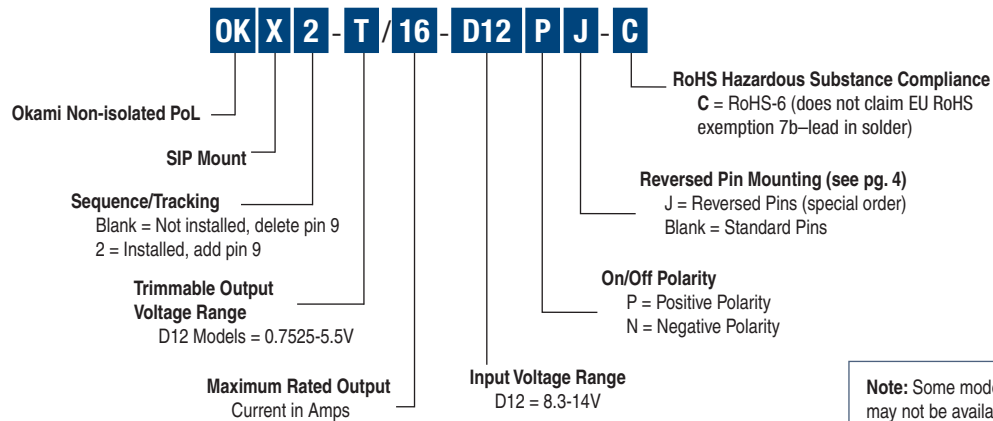
① The input voltage range must be 13.2 Volts max. for V_{out} >= 3.63 V.

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.

PART NUMBER STRUCTURE

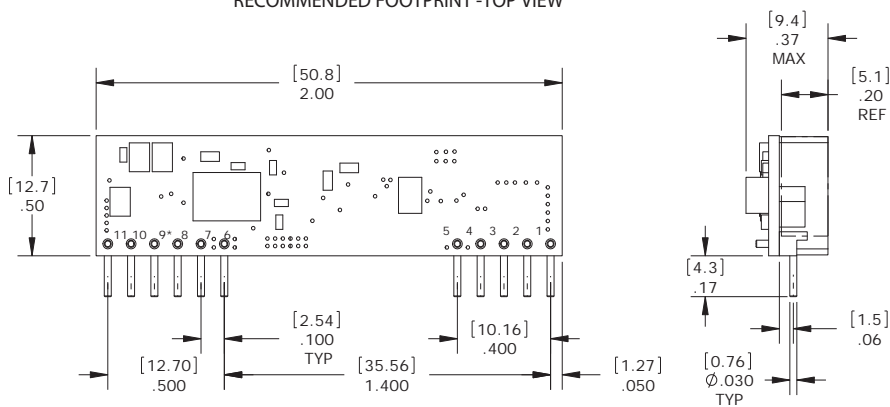
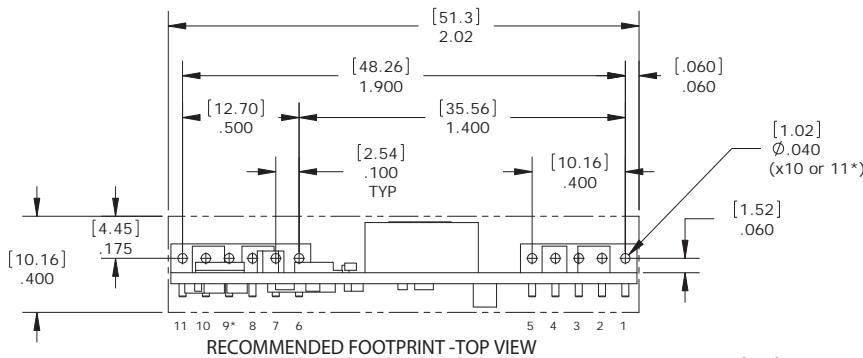


Note: Some model number combinations may not be available. See Ordering Guide above. Contact Murata Power Solutions for availability.

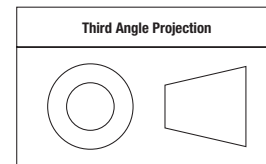
MECHANICAL SPECIFICATIONS

I/O CONNECTIONS			
Pin	Function	Pin	Function
1	+ Output	6	Common
2	+ Output	7	+ Input
3	+Sense In	8	+ Input
4	+ Output	9*	*Sequence/Tracking
5	Common	10	Trim
		11	On/Off Control

*Sequence/Tracking is optional. If not installed, Pin 9 is omitted.



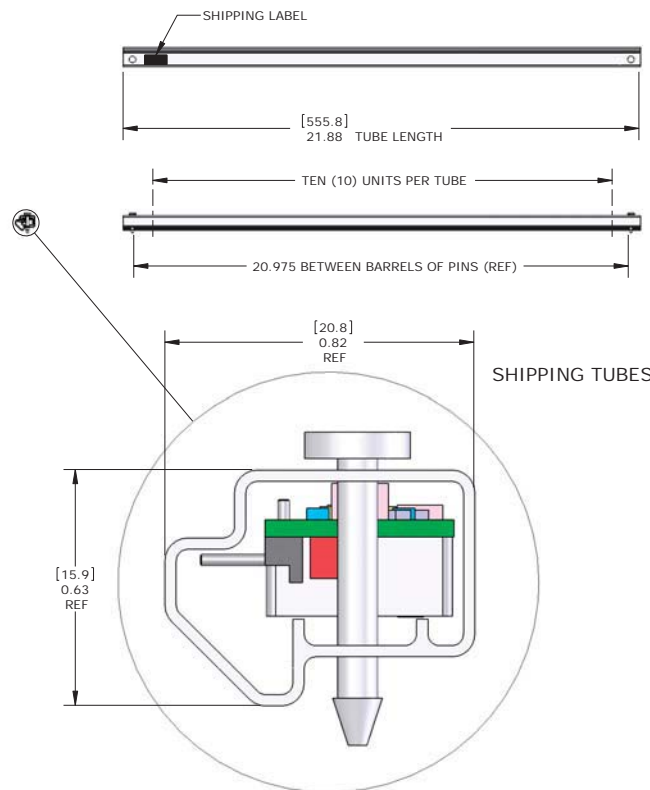
Dimensions are in inches (mm shown for ref. only).



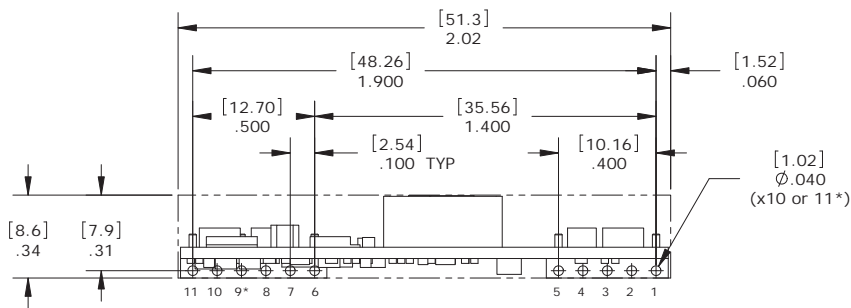
Tolerances (unless otherwise specified):
 .XX ± 0.02 (0.5)
 .XXX ± 0.010 (0.25)
 Angles ± 1°

Components are shown for reference only.

MATERIAL:
 PINS: COPPER ALLOY
 FINISH: (ALL PINS)
 PINS: TIN



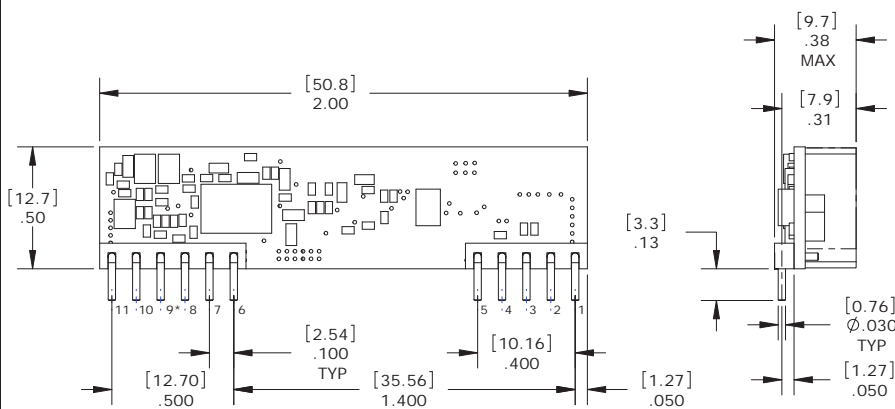
MECHANICAL SPECIFICATIONS, CONTINUED: "J" PACKAGE OPTION (REVERSED HEADERS)



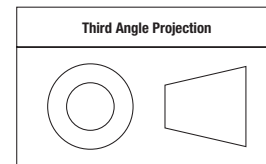
RECOMMENDED FOOTPRINT -TOP VIEW

I/O CONNECTIONS			
Pin	Function	Pin	Function
1	+ Output	6	Common
2	+ Output	7	+ Input
3	+Sense In	8	+ Input
4	+ Output	9*	*Sequence/Tracking
5	Common	10	Trim
		11	On/Off Control

*Sequence/Tracking is standard for OKX2. On OKX models, Pin 9 is omitted.



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



Tolerances (unless otherwise specified):
 .XX ± 0.02 (0.5)
 .XXX ± 0.010 (0.25)
 Angles ± 1°

Components are shown for reference only.

MATERIAL:
 PINS: COPPER ALLOY
 FINISH: (ALL PINS)
 PINS: TIN