



Okami™ OKY-T/10 & T/16-D12 Series

Programmable DOSA-SMT 10/16-Amp DC/DC Converters



PRODUCT OVERVIEW

The OKY-T/10 and -T/16 series are miniature SMT 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 remote sense. 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

- Wide 8.3-14 VDC input range
- Non-isolated output adjustable from 0.7525 to 5.5 Volts up to 16 Amps
- DOSA-compatible SMT package
- Optional sequence/tracking operation
- Outstanding thermal performance and derating
- Short circuit protection
- On/Off control
- High efficiency up to 94.5%
- Over temperature protection
- Meets UL/EN/IEC 60950-1 safety approvals.

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Simplified Block Diagram

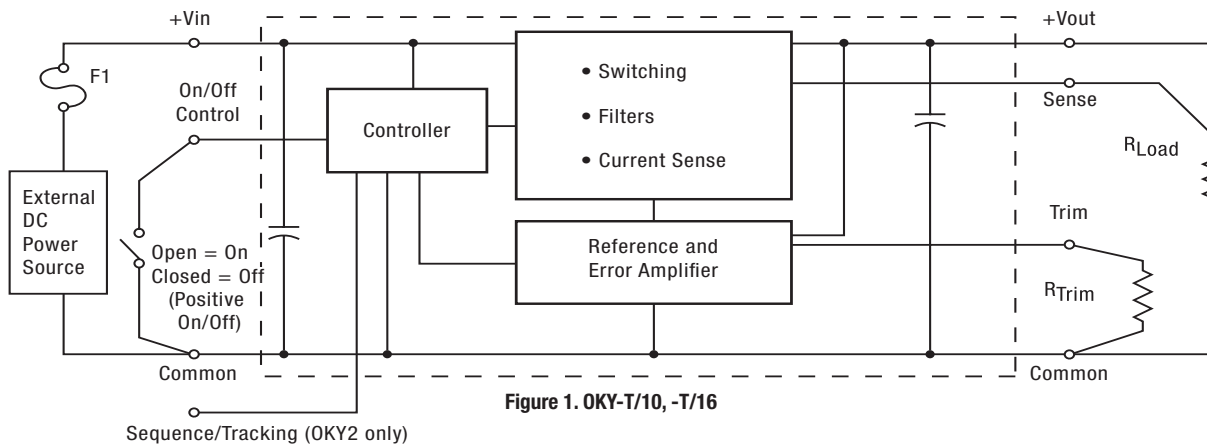


Figure 1. OKY-T/10, -T/16

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



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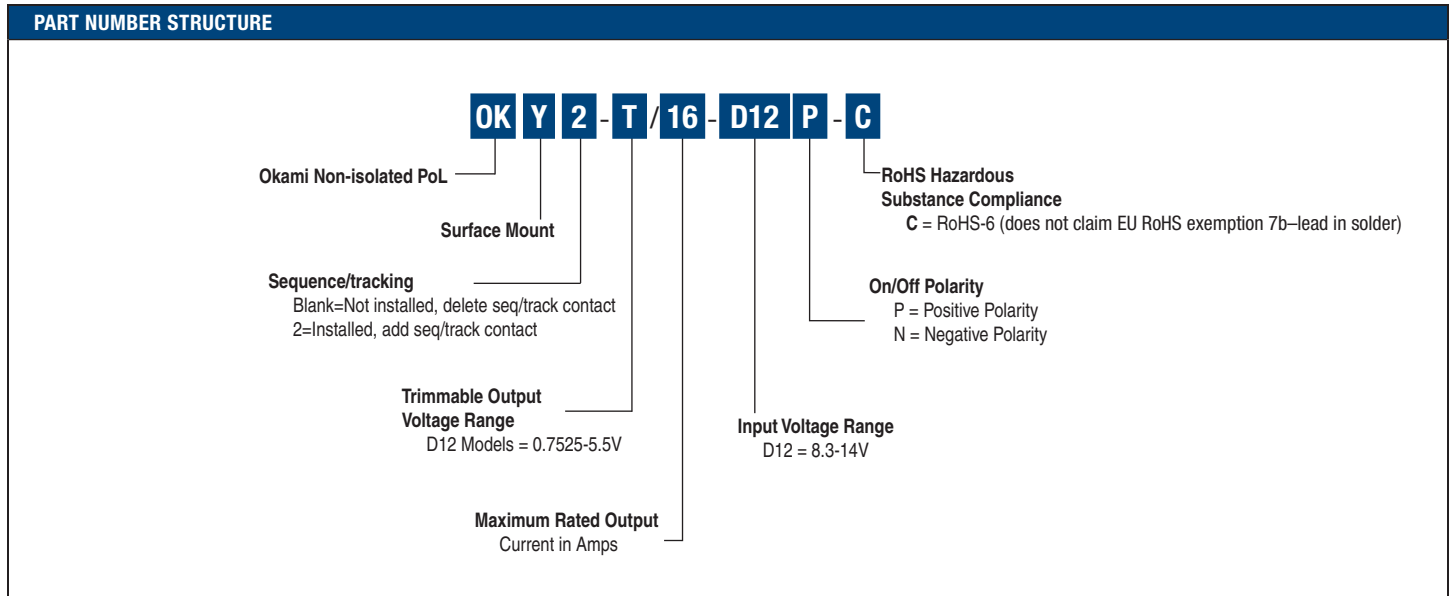
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Performance Specifications and Ordering Guide

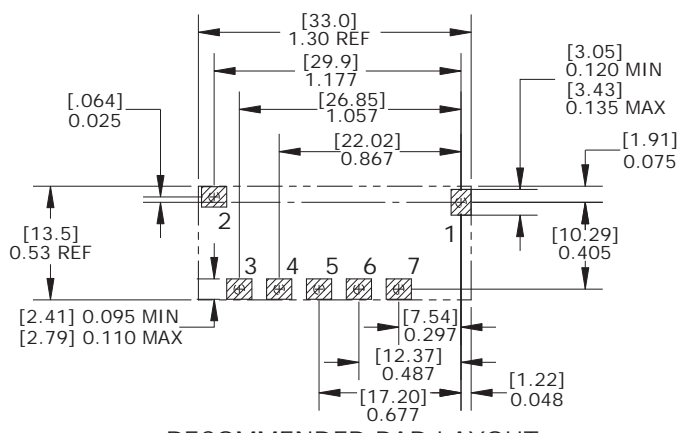
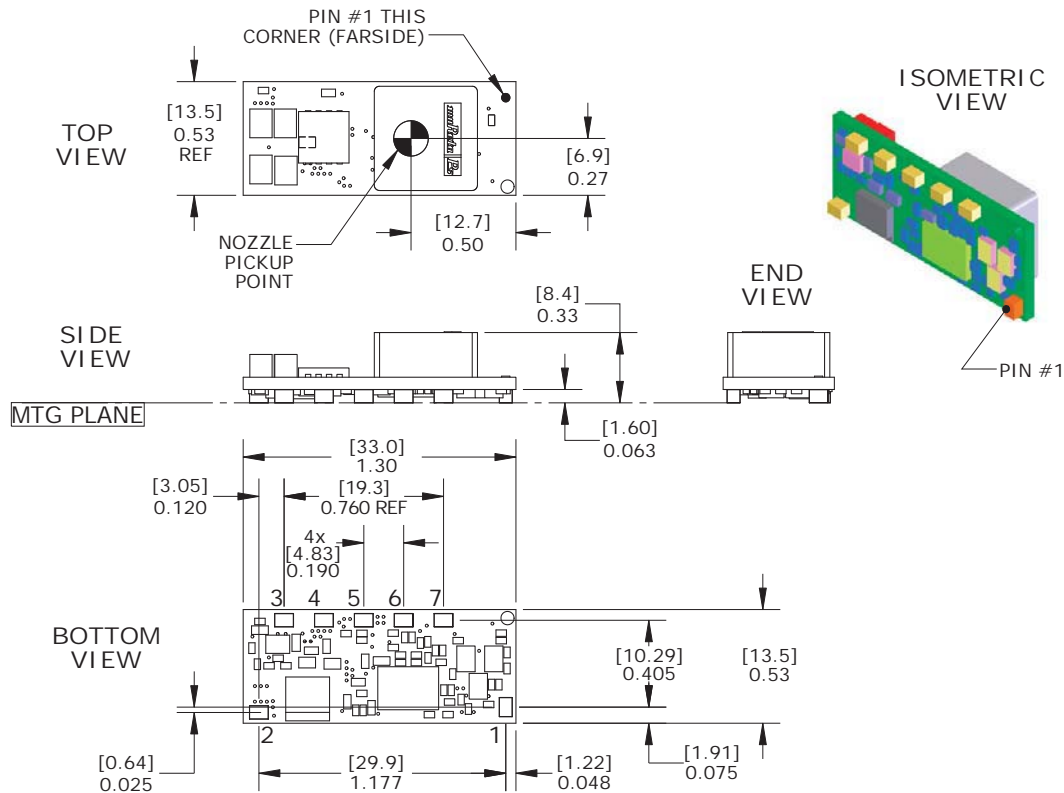
ORDERING GUIDE																
Model Number ③	Output						Input				Efficiency		On/Off Polarity	Sequence/Track	Package, C83	
	V _{OUT} (Volts)	I _{OUT} (Amps max)	Power (Watts)	R/N (mVp-p)	Regulation (Max.)		V _{IN} Nom. (Volts)	Range (Volts)	I _{IN} , no load (mA)	I _{IN} , full load (Amps)	Min.	Typ.			Case ①	Pinout
				Max. ⑤	Line	Load										
OKY-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	1.3x0.53x0.33 (33x13.5x8.4)	P66
OKY-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	1.3x0.53x0.33 (33x13.5x8.4)	P66
OKY2-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	1.3x0.53x0.33 (33x13.5x8.4)	P66
OKY2-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	1.3x0.53x0.33 (33x13.5x8.4)	P66
OKY-T/16-D12P-C	0.7525-5.5	16	80	40	±0.22%	±0.25%	12	8.3-14	80	7.09	92.5%	94%	Pos.	No	1.3x0.53x0.33 (33x13.5x8.4)	P66
OKY-T/16-D12N-C	0.7525-5.5	16	80	40	±0.22%	±0.25%	12	8.3-14	80	7.09	92.5%	94%	Neg.	No	1.3x0.53x0.33 (33x13.5x8.4)	P66
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- ① Dimensions are in inches (mm).
- ② The input voltage range must be 13.2 Volts max. for V_{out} >= 3.63 V.
- ③ 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.
- ④ Use adequate ground plane and copper thickness adjacent to the converter.
- ⑤ Ripple and Noise (R/N) is shown at V_{out}=1V. See specs for details.



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MECHANICAL SPECIFICATIONS



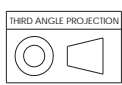
DIMENSIONS ARE IN INCHES [mm]

TOLERANCES:
 x.xxx ±.02 in. ANGLES: ±1°
 x.xx ±.010 in.

COMPONENTS SHOWN ARE FOR REFERENCE ONLY

MATERIAL:
 SMT PINS: COPPER ALLOY

FINISH: (ALL PINS)
 GOLD (5u"MIN) OVER NICKEL (50u" MIN)



I/O CONNECTIONS

Pin	Function P66
1	On/Off Control *
2	+Vin
3	Vtrack Seq**
4	Gnd (Common)
5	+Vout
6	Trim
7	Sense

* The Remote On/Off can be provided with either positive (P suffix) or negative (N suffix) polarity.

** Vtrack Seq applies only to OKY2 models. No connection for OKY models.

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