



# Okami™ OKY-T/10 & T/16-W5 Series

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



### PRODUCT OVERVIEW

The OKY-T/10 and -T/16 series are 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](http://www.dosapower.com)). Applications include powering CPU's, datacom/telecom systems, programmable logic and mixed voltage systems.

The wide input range is 2.4 to 5.5 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 2.4-5.5 VDC input range
- Non-isolated output adjustable from 0.7525 to 3.63 Volts up to 16 Amps
- DOSA-compatible SMT package
- Drives 1000  $\mu$ F ceramic capacitive loads
- Optional sequence/tracking operation
- Outstanding thermal performance and derating
- Short circuit protection
- On/Off control
- High efficiency with no heatsink
- Over temperature protection
- Designed to meet UL/EN/IEC 60950-1 safety approvals.

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### Simplified Block Diagram

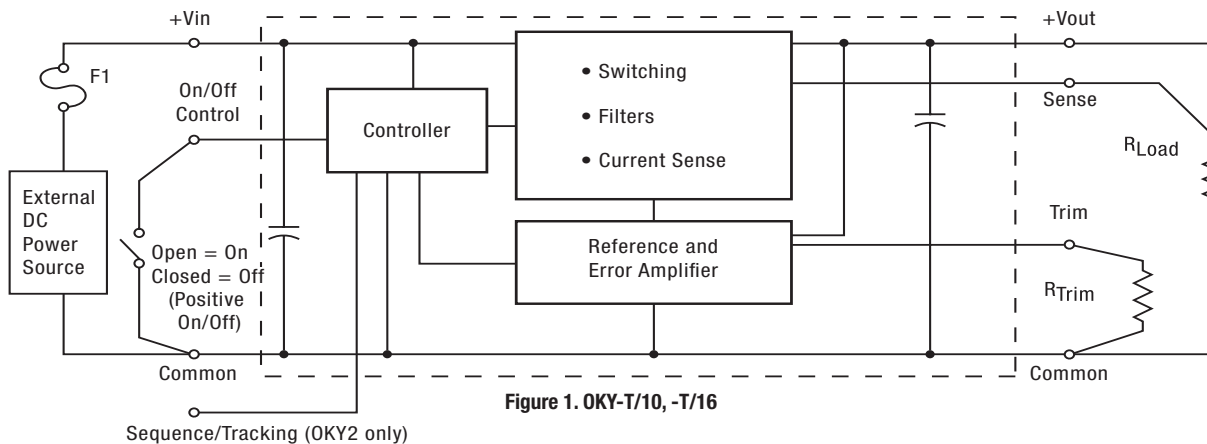


Figure 1. OKY-T/10, -T/16

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



**muRata PS Murata Power Solutions** **Okami™ OKY-T/10 & T/16-W5 Series**  
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**Performance Specifications and Ordering Guide**

ORDERING GUIDE																
Model Number	Output					Input				Efficiency ①		On/Off Polarity	Sequence/Tracking	Package, C83		
	V <sub>OUT</sub> (Volts)	I <sub>OUT</sub> (Amps max)	Power (Watts)	R/N (mVp-p)	Regulation (Max.)		V <sub>IN</sub> Nom. (Volts)	Range (Volts)	I <sub>IN</sub> , no load (mA)	I <sub>IN</sub> , full load (Amps)	Min.			Typ.	Case ⑤	Pinout
				Max. ④	Line	Load										
OKY-T/10-W5P-C	0.7525-3.63	10	33.0	20	±0.2%	±1%	5	2.4-5.5	80	7.58	92%	95%	Pos.	No	1.3x0.53x0.33 (33x13.5x8.3)	P66
OKY-T/10-W5N-C	0.7525-3.63	10	33.0	20	±0.2%	±1%	5	2.4-5.5	80	7.58	92%	95%	Neg.	No	1.3x0.53x0.33 (33x13.5x8.3)	P66
OKY2-T/10-W5P-C	0.7525-3.63	10	33.0	20	±0.2%	±1%	5	2.4-5.5	80	7.58	92%	95%	Pos.	Yes	1.3x0.53x0.33 (33x13.5x8.3)	P66
OKY2-T/10-W5N-C	0.7525-3.63	10	33.0	20	±0.2%	±1%	5	2.4-5.5	80	7.58	92%	95%	Neg.	Yes	1.3x0.53x0.33 (33x13.5x8.3)	P66
OKY-T/16-W5P-C	0.7525-3.63	16	52.8	50	±0.2%	±1%	5	2.4-5.5	80	11.12	92.5%	95%	Pos.	No	1.3x0.53x0.33 (33x13.5x8.3)	P66
OKY-T/16-W5N-C	0.7525-3.63	16	52.8	50	±0.2%	±1%	5	2.4-5.5	80	11.12	92.5%	95%	Neg.	No	1.3x0.53x0.33 (33x13.5x8.3)	P66
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① Efficiency is shown at V<sub>out</sub>=1V.

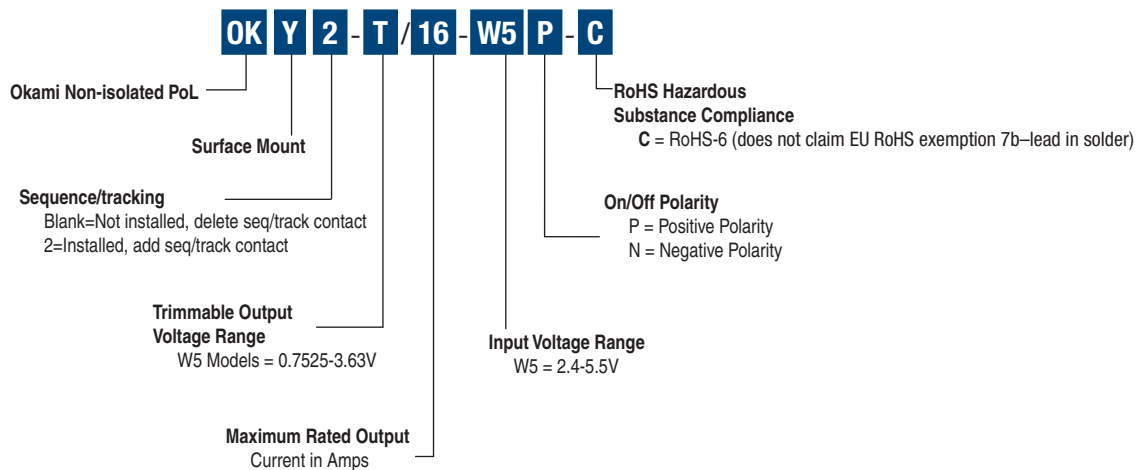
② All specifications are at nominal line voltage, V<sub>out</sub>=nominal (3.3V) and full load, +25 deg.C. unless otherwise noted.  
 Output capacitors are 1 µF ceramic and 10 µF electrolytic in parallel. Input cap is 22 µF. See detailed specifications.  
 I/O caps are necessary for our test equipment and may not be needed for your application.

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

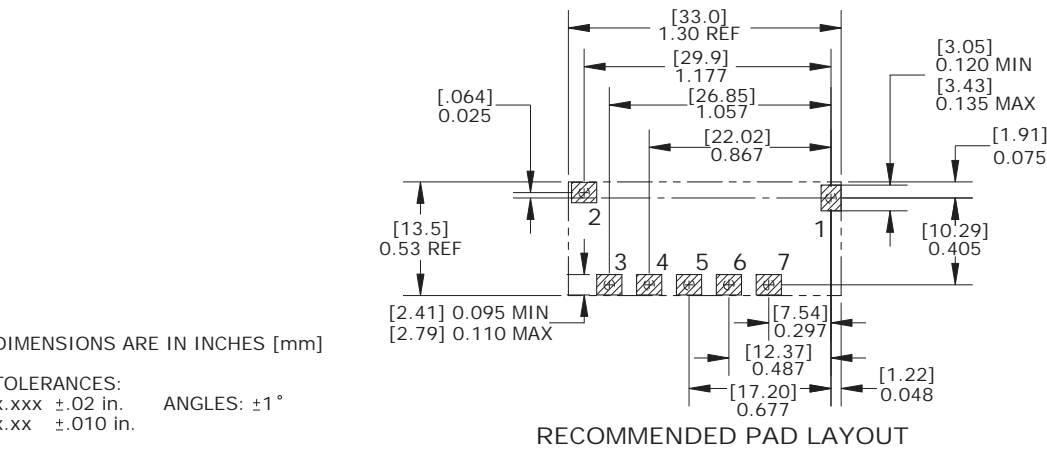
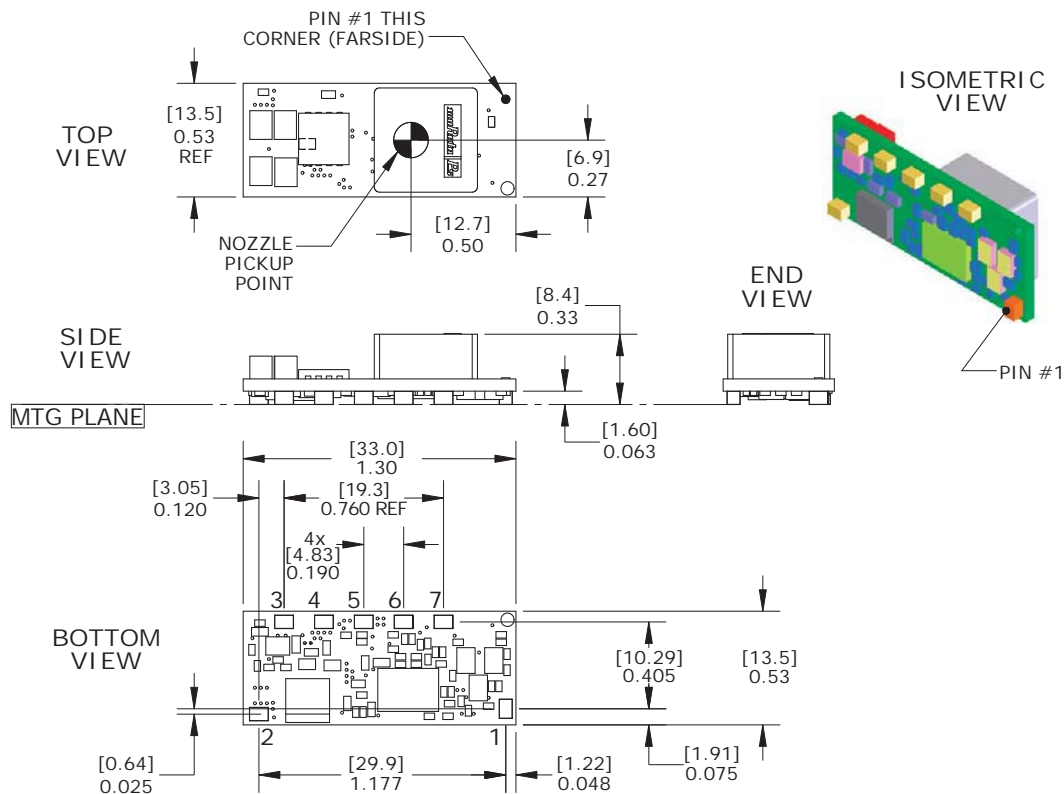
④ Ripple and Noise (R/N) is shown at V<sub>out</sub>=1V. See specs for details.

⑤ Dimensions are in inches (mm).

**PART NUMBER STRUCTURE**



**MECHANICAL SPECIFICATIONS**



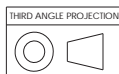
DIMENSIONS ARE IN INCHES [mm]

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 (50u"MIN) OVER NICKEL (50u" MIN)



**Case C83**

**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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