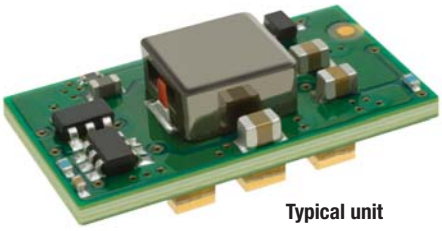
Murata Power Solutions

Okami™ OKY-T/3,T/5-D12 Series

Adjustable Output 3 and 5-Amp DOSA-SMT DC/DC Converters



Typical unit

PRODUCT OVERVIEW

The OKY-T/3 and -T/5 series are miniature 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, 3 Amps (T/3 models) or 5 Amps (T/5 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. 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 SMT POL DC/DC power module
- 8.3-14Vdc input voltage range
- Programmable output voltage from 0.7525-5.5Vdc
- 3 Amp (T/3) or 5 Amp (T/5) output current models
- Drives 1000 µF ceramic capacitive loads
- High power conversion efficiency 93% at 3.3 Vout
- Outstanding thermal derating performance
- Over temperature and over current protection
- On/Off control
- UL/EN/IEC 60950-1 safety
- Industry-standard (DOSA) surface-mount package
- RoHS-6 hazardous substance compliance

Contents

Connection Diagram

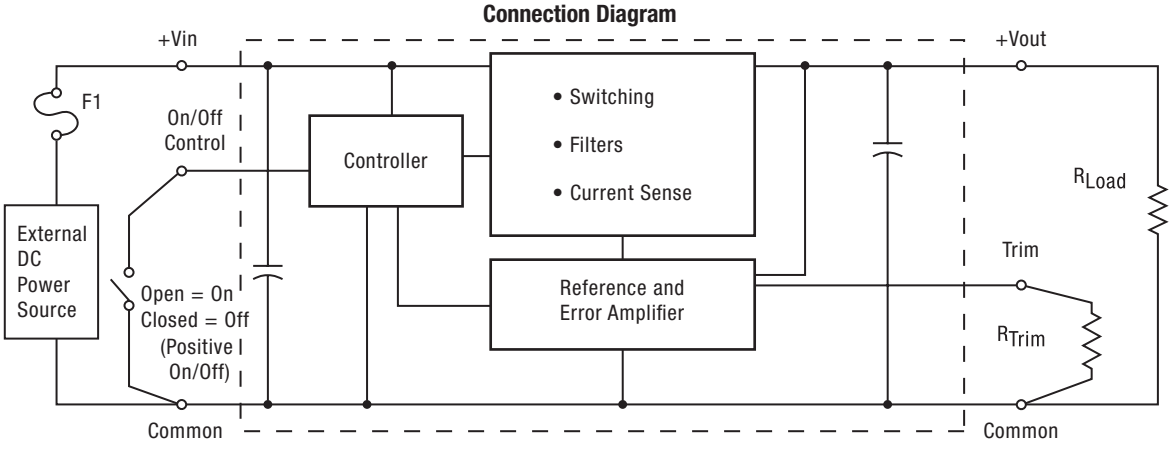


Figure 1. OKY-T/3, -T/5

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

RoHS COMPLIANT

For full details go to www.murata-ps.com/rohs

DOSA Distributed-power Open Standards Alliance

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Performance Specifications Summary and Ordering Guide

ORDERING GUIDE

Root Model ②	Output						Input				Efficiency		Package	
	V_{OUT} (Volts)	I_{OUT} (Amps max)	Power (Watts)	R/N (mVp-p)⑤	Regulation (Max.)③		V_{IN} Nom. (Volts)	Range (Volts)	I_{IN}, no load (mA)	I_{IN}, full load (Amps)			Case C72 ①	Pinout
				Max.	Line	Load					Min.	Typ.		
OKY-T/3-D12N-C	0.75-5.5 ⑦	3	15	25	±0.1%	±0.2%	12	8.3-14	80	1.34	91.5%	93%	0.47 x 0.82 x 0.28 (11.9 x 20.8 x 7.0)	P78
OKY-T/3-D12P-C	0.75-5.5 ⑦	3	15	25	±0.1%	±0.2%	12	8.3-14	80	1.34	91.5%	93%	0.47 x 0.82 x 0.28 (11.9 x 20.8 x 7.0)	P78
OKY-T/5-D12N-C	0.75-5.5 ⑥	5	25	25	±0.2%	±0.5%	12	8.3-14	80	2.24	91.5%	93%	0.47 x 0.82 x 0.28 (11.9 x 20.8 x 7.0)	P78
OKY-T/5-D12P-C	0.75-5.5 ⑥	5	25	25	±0.2%	±0.5%	12	8.3-14	80	2.24	91.5%	93%	0.47 x 0.82 x 0.28 (11.9 x 20.8 x 7.0)	P78

① Dimensions are in inches (mm).

② These are partial model numbers. Please refer to the part number structure for complete ordering part numbers.

③ All specifications are at nominal line voltage, Vout=nominal (5V for D12 models) and full load, +25 ˚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.

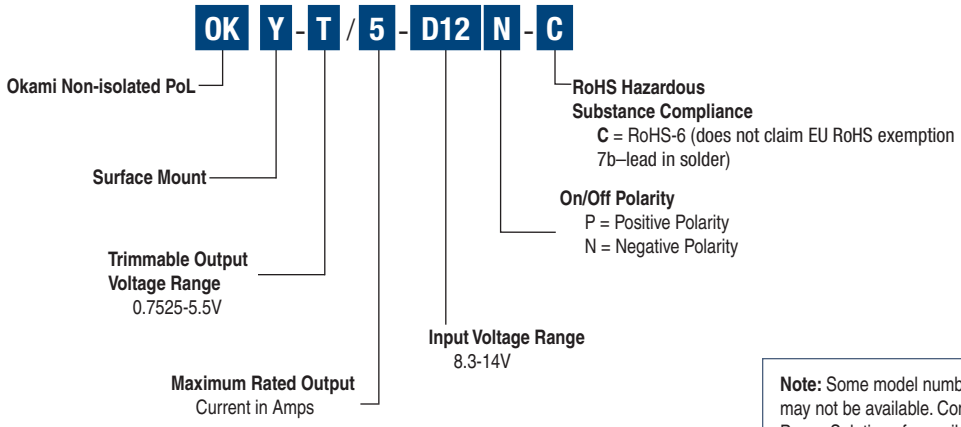
④ Vin must be 2V or higher than Vout for 3.3 to 5V outputs.

⑤ Ripple and Noise is shown at Vout=1V. See specs for details.

⑥ Max. V_{OUT} = 5.1V at I_{OUT} = 5A.

⑦ Max. V_{OUT} = 5.1V at I_{OUT} = 3A.

PART NUMBER STRUCTURE



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

Special Customer Configuration part number:
OKY-T/5-D12N-C-CIS