

Typical units

## FEATURES

- Ultra wide 7 to 36 VDC input range
- Fixed Outputs of 3.3 or 5 VDC up to 1.5 Amps
- Vertical or horizontal SIP-mount, small footprint package
- “No heat sink” direct replacement for 3-terminal 78xx-series linear regulators
- High efficiency with no external components
- Short circuit protection
- Outstanding thermal derating performance
- UL/EN/IEC 60950-1, 2nd Edition safety approvals

## PRODUCT OVERVIEW

Fabricated on a 0.41 by 0.65 inch (10.4 by 16.5 mm) Single In-line Package (SIP) module, the OKI-78SR series are non-isolated switching regulator (SR) DC/DC power converters for embedded applications. The fixed single output converters offer both tight regulation and high efficiency directly at the power usage site and are a direct plug-in replacement for TO-220 package 78xx series linear regulators. Typically, no extra outside components are required.

Two nominal output voltages are offered (3.3 and 5 VDC), each with 1.5 Amp maximum output. Based on fixed-frequency buck switching topology, the high efficiency means very low heat and little electrical noise, requiring no external components. The ultra wide input range is 7 to 36 Volts DC.

Protection features include short circuit current limit protection. The OKI-78SR is designed to meet all standards approvals. RoHS-6 (no lead) hazardous material compliance is specified as standard.

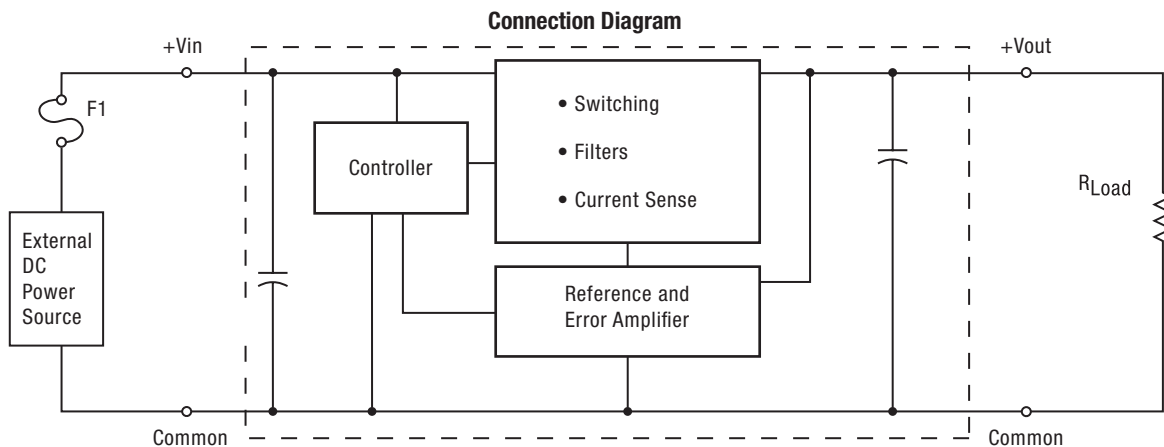


Figure 1. OKI-78SR

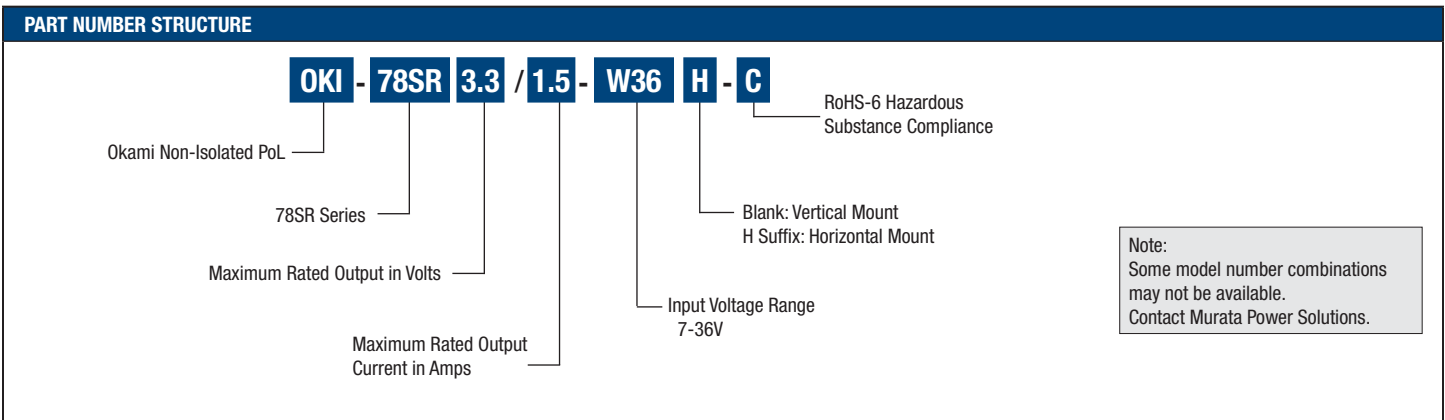
Note: Murata Power Solutions strongly recommends an external input fuse, F1. See specifications.



FUNCTIONAL SPECIFICATIONS SUMMARY AND ORDERING GUIDE													
Root Model	Output						Input				Efficiency		Package ①
	V <sub>OUT</sub> (Volts)	I <sub>OUT</sub> (Amps max)	Power (Watts)	R/N (mVp-p)	Regulation (Typ.)		V <sub>IN</sub> Nom. (Volts)	Range (Volts)	I <sub>IN</sub> , no load (mA)	I <sub>IN</sub> , full load (Amps)	Min.	Typ.	
				Max.	Line	Load							
<b>OKI-78SR-3.3/1.5-W36-C</b>	3.3	1.5	4.95	40	±0.25%	±0.25%	24	7-36	5	0.48	84%	85.5%	0.41 x 0.65 x 0.3 (10.4 x 16.5 x 7.62)
<b>OKI-78SR-5/1.5-W36-C</b>	5	1.5	7.5	75	±0.25%	±0.25%	24	7-36	5	0.69	89%	90.5%	0.41 x 0.65 x 0.3 (10.4 x 16.5 x 7.62)

① Dimensions are in inches (mm).

② All specifications are at nominal line voltage, V<sub>OUT</sub> = nominal and full load, +25 °C., with no external capacitor, unless otherwise noted.



**Product Label**

Because of the small size of these products, the product label contains a character-reduced code to indicate the model number and manufacturing date code. Not all items on the label are always used. Please note that the label differs from the product photograph on page 1. Here is the layout of the label:  
The label contains three rows of information:

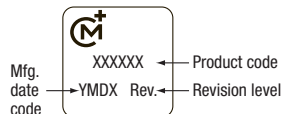


Figure 2. Label Artwork Layout

First row – Murata Power Solutions logo  
Second row – Model number product code (see table)  
Third row – Manufacturing date code and revision level

The manufacturing date code is four characters:

Model Number	Product Code
<b>OKI-78SR-3.3/1.5-W36-C</b>	I33115
<b>OKI-78SR-5/1.5-W36-C</b>	I50115
<b>OKI-78SR-3.3/1.5-W36H-C</b>	I33115H
<b>OKI-78SR-5/1.5-W36H-C</b>	I50115H

First character – Last digit of manufacturing year, example 2009  
Second character – Month code (1 through 9 = Jan-Sep; 0, N, D = Oct, Nov, Dec)  
Third character – Day code (1 through 9 = 1 to 9, 10 = 0 and 11 through 31 = A through Z)  
Fourth character – Manufacturing information