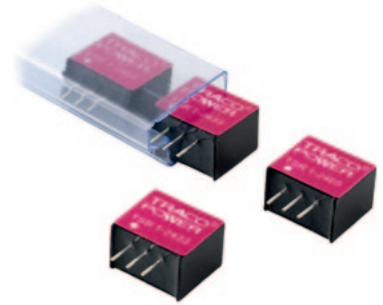


# TSR-1 Series ▶ 1A

- ▶ High performance switching regulator
- ▶ Pin compatible with LM78xx linear regulators
- ▶ High efficiency up to 94 %
- ▶ No heat-sink required
- ▶ Low standby current
- ▶ Wide input voltage range 4.6–36 VDC
- ▶ Output voltages from 1.2 to 15 VDC
- ▶ Short circuit protection
- ▶ Low output ripple & noise



## Specifications

Line regulation	0.2 % max.
Load regulation	0.4 % max.
Ripple & noise (20 MHz BW)	<50 mVpk-pk for models up to 6.5 VDC output <75 mVpk-pk for models higher 6.5 VDC output
Short circuit protection	continuous, automatic recovery
Efficiency	90 % typ.
Operating temperature range	-40 °C to +85 °C above 60 °C derating 2.4%/K
I/O isolation voltage	non-isolated
Standby input current	2 mA typ.
Casing	plastic (UL 94 V-0 rated)
Full datasheet	<a href="http://www.tracopower.com/products/tsr1.pdf">www.tracopower.com/products/tsr1.pdf</a>

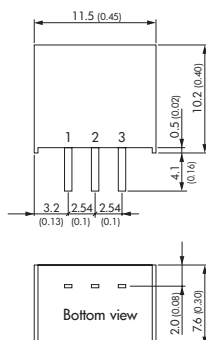
## SIP Models

Order code	Input voltage range *	Output voltage	Output current max.
TSR 1-2412	4.6 – 36 VDC	1.2 VDC	1000 mA
TSR 1-2415	4.6 – 36 VDC	1.5 VDC	1000 mA
TSR 1-2418	4.6 – 36 VDC	1.8 VDC	1000 mA
TSR 1-2425	4.6 – 36 VDC	2.5 VDC	1000 mA
TSR 1-2433	4.75 – 36 VDC	3.3 VDC	1000 mA
TSR 1-2450	6.5 – 36 VDC	5.0 VDC	1000 mA
TSR 1-2465	9.0 – 36 VDC	6.5 VDC	1000 mA
TSR 1-2490	12 – 36 VDC	9.0 VDC	1000 mA
TSR 1-24120	15 – 36 VDC	12 VDC	1000 mA
TSR 1-24150	18 – 36 VDC	15 VDC	1000 mA

\* For an input voltage higher than 32 VDC an input capacitor 22 µF / 50V is required

Product suitable for negative output voltage:  
See TSRN-1 series page 90 (trough hole)  
See TSRN-1SM series page 91 (SMD)

## Dimensions



() = Inches

## Pinout SIP Models

Pin	
1	+Vin (Vcc)
2	GND
3	+Vout