

# Features

# Switching Regulator

- Efficiency up to 95%, no need for heatsinks
- Industry standard pin-out
- 1.5A start-up overload capacity
- Non-isolated regulator, very low standby current
- Wide input range (7V -74VDC)
- Short circuit protection
- Fixed switching frequency (250kHz), shielded magnetics



## R-78T-1.0

**1.0 Amp**  
**SMD**  
**Single Output**

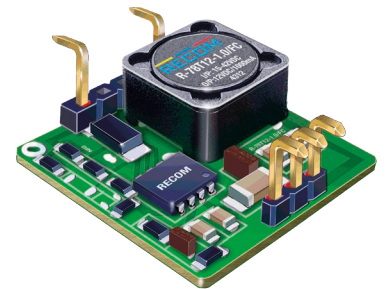


### Description

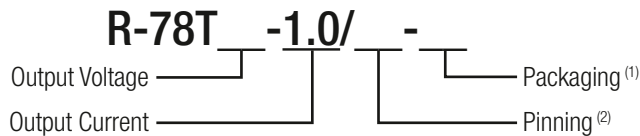
The R-78T is a switching regulator with a wide input voltage range and a low profile SMD package. Three output voltages are available as standard: 3.3V, 5V and 12V. Due to the 1.5A start-up overload capability, the R-78T can be used to replace 1A or 1.5A regulators in many applications. These modules come with three different styles to be pin-compatible with existing solutions, but at a lower cost.

### Selection Guide

Part Number	Input Voltage Range [VDC]	Output Voltage [VDC]	Output Current [mA]	Efficiency	
				@ min Vin [%]	@ max. Vin [%]
R-78T3.3-1.0	7 - 42	3.3	1000	88	79
R-78T5.0-1.0	8 - 42	5.0	1000	92	85
R-78T12-1.0	15 - 42	12	1000	95	92



### Model Numbering



#### Notes:

Note1: add suffix „-R“ for tape & reel packaging or „-Tray“ for tray packaging

Note2: add suffix „/FC“, „/AC“ or „/AL“ for required pinning option, for more information see page I-5 to I-6

#### Ordering Examples:

R-78T3.3-1.0/FC-R = 3.3VDC Output Voltage, 1.0A, FC pinning, tape and reel packaging

R-78T5.0-1.0/AC-Tray = 5.0VDC Output Voltage, 1.0A, AC pinning, tray packaging

**Specifications** (measured @ Ta= 25°C, 10% minimum load, unless otherwise stated)

**BASIC CHARACTERISTICS**

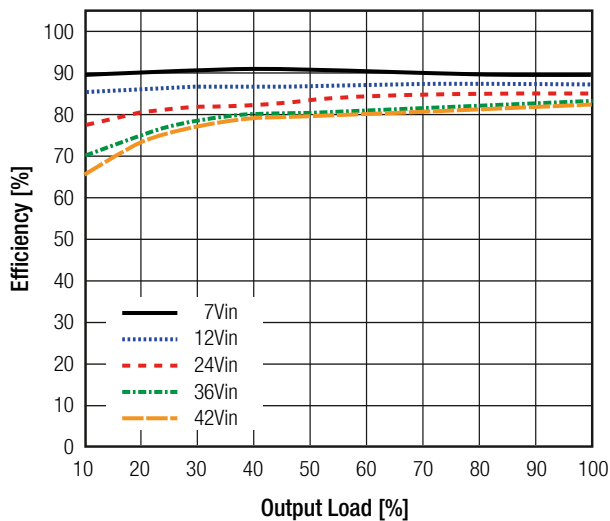
Parameter	Condition	Min.	Typ.	Max.
Internal Input Filter				C filter
Input Voltage Range	nom. Vin= 3.3VDC	7VDC		42VDC
	nom. Vin= 5.0VDC	8VDC		42VDC
	nom. Vin= 12VDC	15VDC		42VDC
Overload Capability <sup>(3)</sup>	peak duty cycle 10%			150%, 10s
Quiescent Current			1mA	
Minimum Load		10%		
Internal Operating Frequency			350kHz	
Output Ripple and Noise	20MHz BW		50mVp-p	100mVp-p

**Notes:**

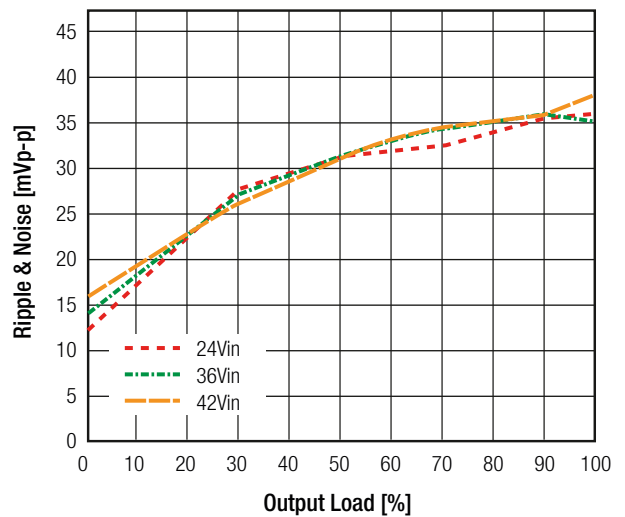
Note3: For more information, please refer to „Overload Capability Graph“ on page I-4

**R-78T3.3-1.0**

**Efficiency vs. Load**

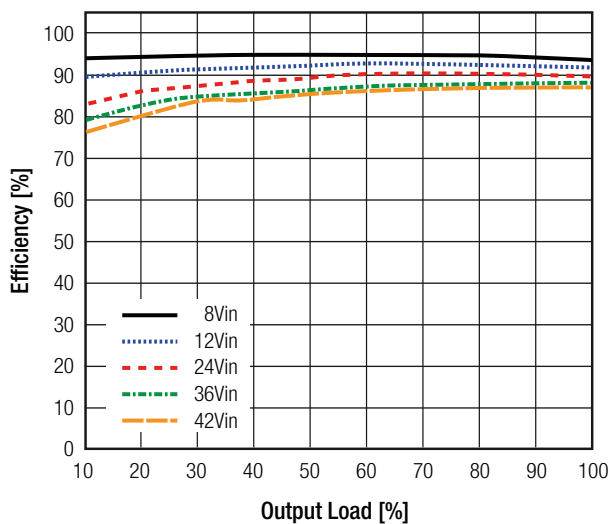


**Ripple vs. Load**

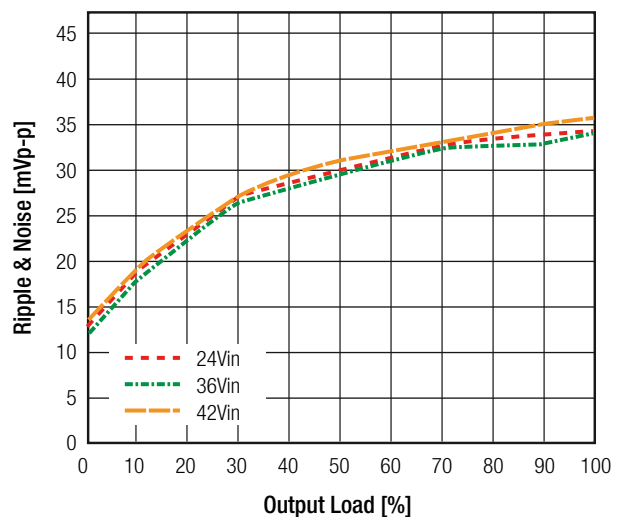


**R-78T5.0-1.0**

**Efficiency vs. Load**



**Ripple vs. Load**



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