

Switching Regulator

- Efficiency up to 95%, no heatsinks required
- Pin compatible with LM78XX linears
- Low profile (L/W/H=11.5 x 8.5 x 17.5mm)
- Wide input range
- Short circuit protection, thermal shutdown
- Low ripple and noise
- „L“ version with 90° pins

R-78B-1.5(L)

Selection Guide

Part Number	Input Voltage Range [VDC]	Output Voltage [VDC]	Output Current [A]	Efficiency	
				@ min Vin [%]	@ max. Vin [%]
R-78B1.5-1.5 ⁽¹⁾	4.75 - 18	1.5	1.5	83	78
R-78B1.8-1.5 ⁽¹⁾	4.75 - 18	1.8	1.5	85	81
R-78B2.5-1.5 ⁽¹⁾	4.75 - 18	2.5	1.5	88	84
R-78B3.3-1.5 ⁽¹⁾	4.75 - 18	3.3	1.5	91	88
R-78B5.0-1.5 ⁽¹⁾	6.5 - 18	5.0	1.5	94	92
R-78B6.5-1.5 ⁽¹⁾	8.0 - 18	6.5	1.5	95	93

R-78B -1.5(L)

Output Voltage ———— Pinning

————— Output Current

Note1: add suffix "L" for 90° bent pins, e.g. R-78B5.0-1.5L

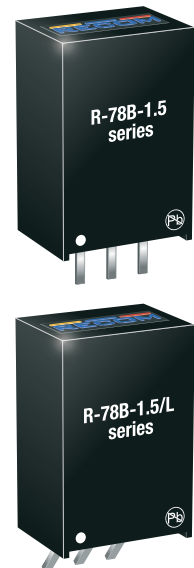
BASIC CHARACTERISTICS

Parameter	Condition	Min.	Typ.	Max.
Quiescent Current	nom. Vin= 12VDC		7mA	9mA
Internal Power Dissipation	Vout= 1.5VDC			0.65W
Internal Operating Frequency	nom. Vin= 12VDC	300kHz	340kHz	380kHz
Minimum Load ⁽²⁾		0%		
Output Ripple and Noise ⁽³⁾	20MHz BW		15mVp-p	30mVp-p
Ref. Back Ripple Current			150mA-p-p	200mA-p-p
Absolute Maximum Capacitive Load	1 second start up, no external components <1 second start up + diode protection circuit			1000µF 6800µF

Note2: Operation under no load will not harm the converter, but specifications may not be met
A minimum load of 10mA is recommended

Note3: Output Ripple and Noise is tested from 10% to 100% load

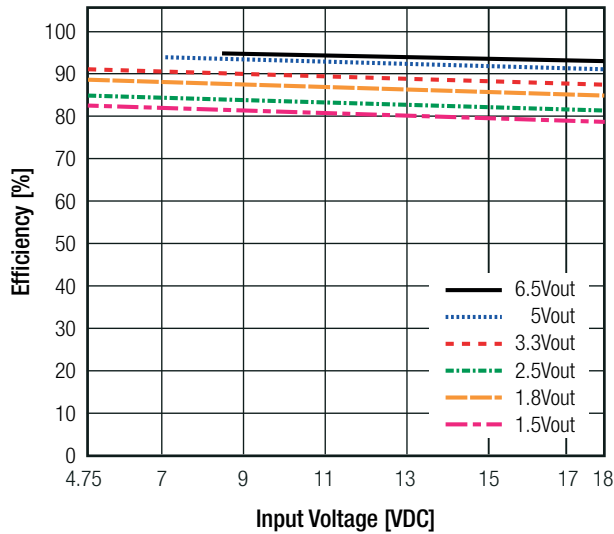
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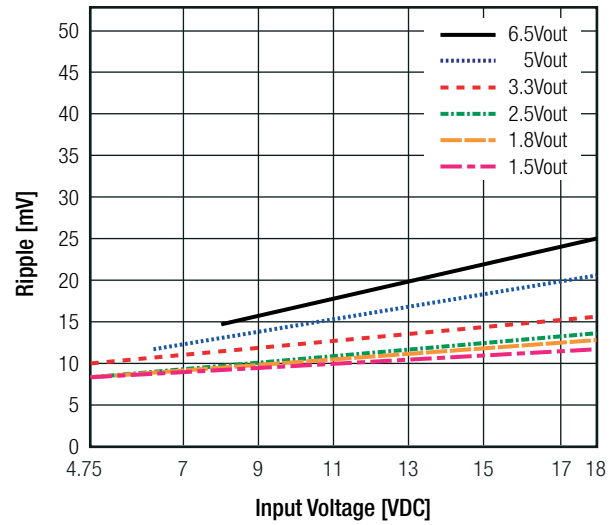
EN55032 compliant
IEC/EN60950-1 certified

Specifications (measured @ $T_a = 25^\circ\text{C}$, 10% minimum load, unless otherwise stated)

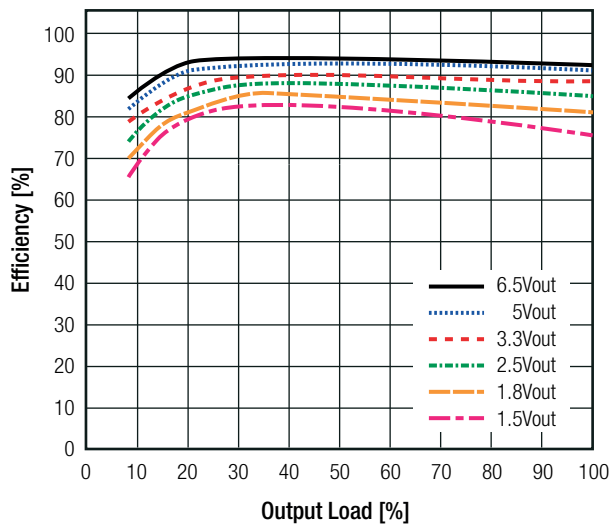
Efficiency vs. V_{in} (full load)



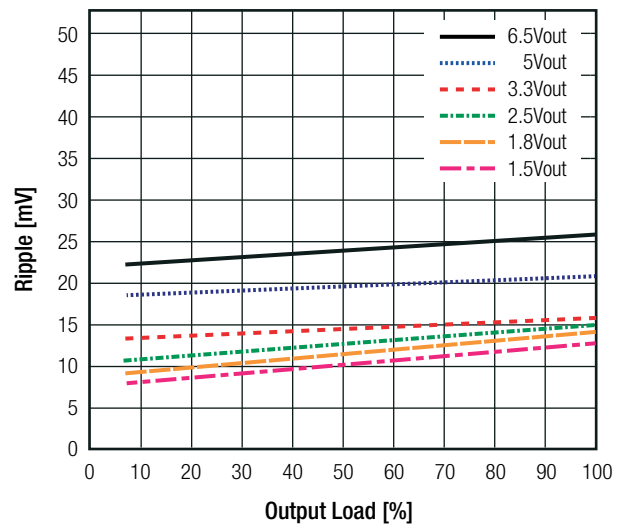
Ripple vs. V_{in} (full load)



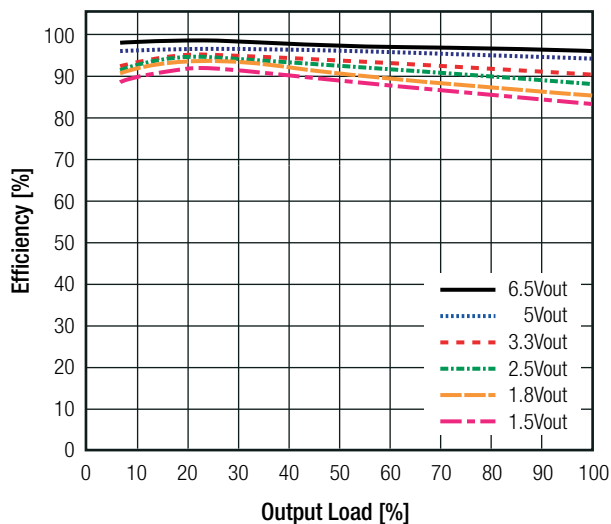
Efficiency vs. Load (max. V_{in})



Ripple vs. Load (max. V_{in})



Efficiency vs. Load (min. V_{in})



Ripple vs. Load (min. V_{in})

