



LCW78_0.5

Wide Input Non-Isolated & Regulated, Single Output

Switching Regulator

- ⊕ High performance switching regulator
- ⊕ Low profile (L*W*H=11.6*7.5*10.2)
- ⊕ Wide 9V to 75V operating input range
- ⊕ Efficiency up to 94%
- ⊕ Compatible with LM78 pin-out
- ⊕ Short circuit protection (SCP)
- ⊕ Low output ripple & noise

The LCW78_0.5 series cost effective high efficiency switching regulators are ideally suited to replace LM78xx linear regulators and are pin compatible.



Example:
LCW78_05-0.5
 LCW78 = Series; 05 = 5Vout; 0.5 = 0.5A

Common specifications	
Short circuit protection:	Continuous, automatic recovery
Temperature rise at full load:	25°C MAX, 15°C TYP
Cooling:	Free air convection
Operation temperature range:	-40°C~+100°C
Storage temperature range:	-55°C ~+125°C
Lead temperature:	300°C MAX, 1.5mm from case for 10 sec
Operating case temperature:	110°C MAX
Temperature coefficient:	-40°C to +85°C ambient 0.02%/°C MAX
Storage humidity range:	< 95%
Soldering profile:	265°C /10sec. max
MTBF (using MIL-HDBK-217F):	+25°C 200x10 ³ hours
Packing quantities:	42pcs per Tube
Case material:	Non Conductive Black Plastic UL94-V0
Potting material:	Epoxy UL94-V0
Weight:	2.3g

Output specifications						
Item	Test conditions	Min	Typ	Max	Units	
Output voltage accuracy	Full load		±3		%	
Output current	10-500mA					
Output load		2			%	
Output shorted current limit	Vout= 0VDC		1		A	
Internal power dissipation			0.7		W	
Line regulation	Vin= min. to max. at full load		1		%	
Load regulation	0% to 100% load		0.6		%	
Ripple + Noise	20MHz Bandwidth			40	mVp-p	
Dynamic load stability	100% <-> 50% load		±60		mV	
Switching frequency			500		KHz	
Case Thermal Impedance			70		°C/W	
Thermal shutdown	Internal IC junction		160		°C	
Max capacitance load				100	µF	

Note:

1. All specifications measured at TA=25°C, humidity<75%, nominal input voltage and rated output load unless otherwise specified.
2. Only typical models listed. If you need other model, please confirm the power, input voltage and output voltage, and then phone us.

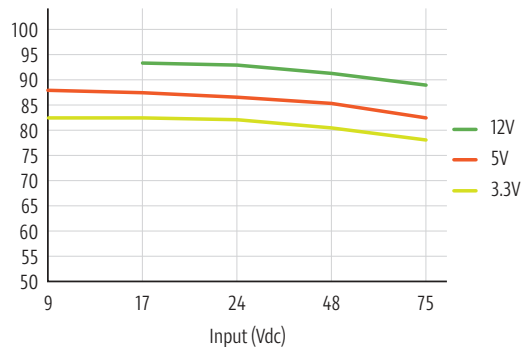
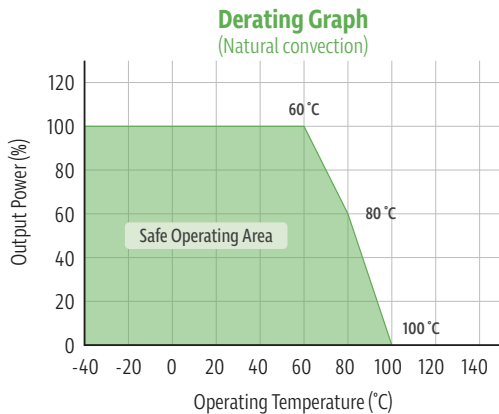
Product Selection Guide

Part Number	Input Voltage Range [VDC]	Output Voltage [VDC]	Output Current [A]	Efficiency [Vin. min]	Efficiency [Vin. max]	Max. capacitive load
LCW78_03-0.5	9-75	3.3	0.5	82	78	100µF
LCW78_05-0.5	9-75	5	0.5	88	82	100µF
LCW78_06-0.5	9-75	6.5	0.5	91	84	100µF
LCW78_09-0.5	14-75	9	0.5	92	86	100µF
LCW78_12-0.5	17-75	12	0.5	94	89	100µF
LCW78_15-0.5	20-75	15	0.5	94	90	100µF

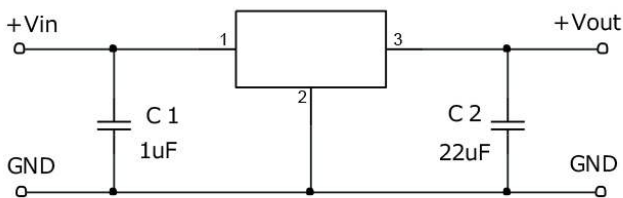
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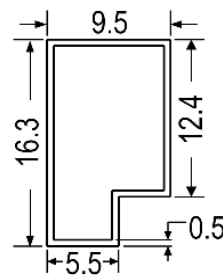
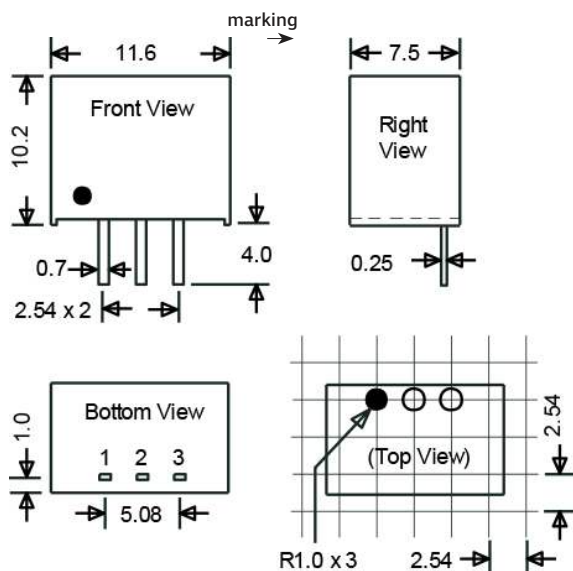
Typical characteristics



Standard application circuit



Mechanical dimensions and footprint Tube outline dimensions



Note:
L=520 ± 2 mm
Devices per tub quantity: 42 PCS

Pin connections	
1	+Vin
2	GND
3	+Vout

Note:
XX.X ± 0.5 mm
XX.XX ± 0.25 mm