



LMS78_0.5R1 series

Non-Isolated - Regulated Single Output - Wide Input

Switching Regulator

- ⊕ 3PIN SIP package
- ⊕ Pin-out compatible with LM78XX linear regulator
- ⊕ Efficiency up to 97%, non isolated, no need for heatsink
- ⊕ Customized solutions available
- ⊕ UL94V-0 package material
- ⊕ Operating temperature from -40°C to +85°C
- ⊕ Short circuit protection, thermal shutdown

The LMS78_0.5R1 series high efficiency switching regulators are ideally suited to replace LM78xx linear regulators and are pin compatible. Offering up to 97% efficiency and an operating temperature range from -40°C to +85°C.



Common specifications		Output specifications					
Short circuit protection:	Hiccup, automatic recovery	Item	Test condition	Min	Typ	Max	Units
Operation temperature range:	-40°C – +85°C (With derating)	Voltage tolerance				±3 %	%
Humidity range:	95% RH (Non-condensing)	Line regulation	1.5V to 6.5V 9V to 15.5V			0.4 0.2	% %
Cooling:	Natural Convection (20LFM)	Load regulation	1.5V to 6.5V (10% To 100% F.L) 9V to 15.5V (10% To 100% F.L.)			0.6 0.4	% %
Switching frequency:	330 KHz	Ripple & noise	1.5V to 6.5V (BW=DC To 20MHz) 9V to 15.5V (BW=DC To 20MHz)			30 40	mVp-p mVp-p
Case material	Non-Conductive Black Plastic	Transient response setting time			350		us
MTBF (MIL-HDBK-217F@25°C):	21098x10 ³ hours	Example: LMS78_02-0.5R1 LM = Series; S = SIP Case; 05 = 5Vout; 0.5 = 0.5A; R1 = Revised					
MTBF (MIL-HDBK-217F@71°C):	4212x10 ³ hours						
Weight:	2.0 g(Typ.)						
Dimensions:	11.6 x 7.6 x 10.4 mm						
Cooling:	Free air convection						

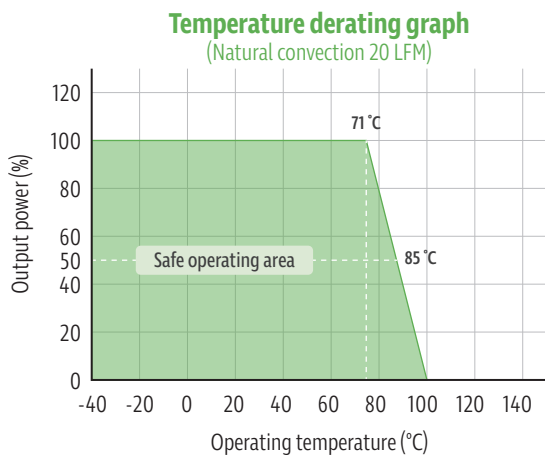
Product Selection Guide

Part Number	Input Voltage (VDC) Nominal (Range)	Output Voltage (VDC)	Output Current (mA)	Efficiency (%) Vin (Min)	Efficiency (%) Vin (Max)
LMS78_1.5-0.5R1	4.75-30	1.5	500	73	63
LMS78_1.8-0.5R1	4.75-34	1.8	500	82	71
LMS78_02-0.5R1	4.75-34	2.5	500	87	77
LMS78_03-0.5R1	4.75-34	3.3	500	91	81
LMS78_05-0.5R1	6.5-34	5.0	500	94	86
LMS78_06-0.5R1	8.0-34	6.5	500	95	88
LMS78_09-0.5R1	11-34	9.0	500	96	92
LMS78_12-0.5R1	15-34	12	500	97	94
LMS78_15-0.5R1	18-34	15	500	97	95

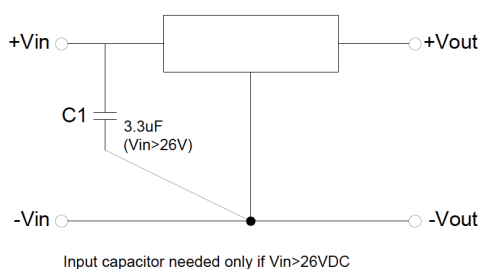
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Typical characteristics

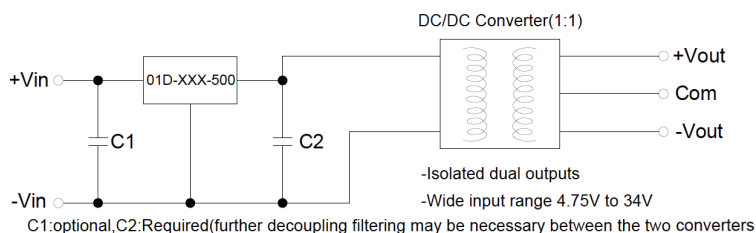


Typical application

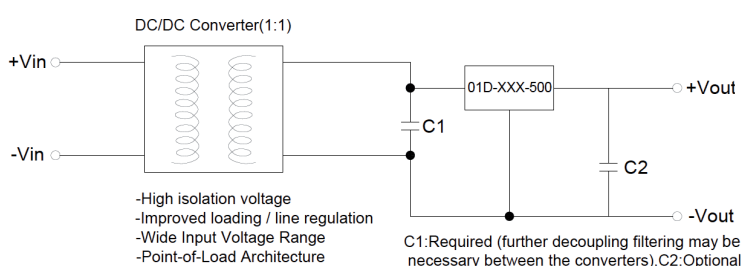


PIN - out	
PIN	Mark
1	+Vin
2	GND
3	+Vout

High efficiency, isolated, dual unregulated outputs



Isolated (up to 6KV), wide Input range regulated output



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Dimensions and recommended layout

