

Features

- 2:1 Wide input range voltage
- 4W power in standard DIP 24 package
- 8mm Clearance and creepage distance @ 250Vac working voltage
- 4000Vac isolation for 2MOPP application
- Built-in EMI class A filter
- Continuous short circuit Protection
- UL94V-0 package material
- EN60601 safety approved



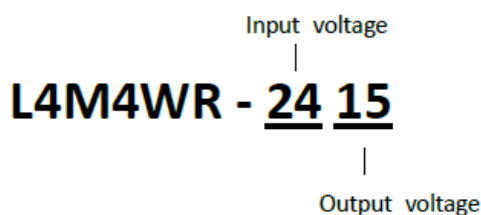
Application:

1. High end industrial application
2. Medical application

Selection Guide

Part number	Input voltage	Output voltage	Output current @full load	Input current @ no load	Efficiency* typ.	Capacitive Load* max.
L4M4WR-053.3	4.5-9Vdc Nom. 5Vdc	3.3Vdc	1000mA	110mA	82%	4700uF
L4M4WR-0505		05Vdc	800mA	110mA	83%	4700uF
L4M4WR-0512		12Vdc	333mA	110mA	86%	2200uF
L4M4WR-0515		15Vdc	267mA	110mA	87%	2200uF
L4M4WR-0524		24Vdc	167mA	110mA	86%	1000uF
L4M4WR-123.3	9-18Vdc Nom. 12Vdc	3.3Vdc	1000mA	45mA	83%	4700uF
L4M4WR-1205		05Vdc	800mA	45mA	84%	4700uF
L4M4WR-1212		12Vdc	333mA	45mA	86%	2200uF
L4M4WR-1215		15Vdc	267mA	45mA	87%	2200uF
L4M4WR-1224		24Vdc	167mA	45mA	87%	1000uF
L4M4WR-243.3	18-36Vdc Nom. 24Vdc	3.3Vdc	1000mA	25mA	82%	4700uF
L4M4WR-2405		05Vdc	800mA	25mA	85%	4700uF
L4M4WR-2412		12Vdc	333mA	25mA	86%	2200uF
L4M4WR-2415		15Vdc	267mA	25mA	87%	2200uF
L4M4WR-2424		24Vdc	167mA	25mA	87%	1000uF

- All specifications valid at nominal input voltage, full load and 25°C after warm-up time unless otherwise stated.
- Capacitive load measure @115Vac/60Hz with constant resistant mode full load.
- The product information and specifications are subject to change without prior notice.



Specifications

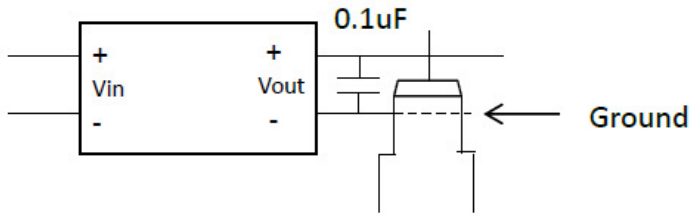
Parameter	Conditions	Min.	Typ.	Max.	Unit
Input					
Input filter					Pi type
Voltage range	Nominal input = 5V	4.5	5	9	Vdc
	Nominal input = 12V	9	12	18	Vdc
	Nominal input = 24V	18	24	36	Vdc
Under voltage lock	5V input		3.7		Vdc
	12V input		7.9		Vdc
	24V input		16.7		Vdc
Output					
Voltage accuracy			±1		%
Line voltage regulation	LL to HL at 100%load			±0.2	%
Load voltage regulation	10% to 100% load			±0.2	%
Minimum load		0			%
Ripple & noise (20MHz)	Nominal Vin @Full load			100	mVp-p
Operating frequency	Nominal Vin @Full load		150		kHz
Environment					
Operating temperature	Nominal Vin @nature convection	-40		95	°C
Storage temperature		-55		125	°C
Max. case temperature				105	°C
Humidity		5		95	%RH
MTBF (MIL-HDBK-217F)	+25°C	6.5k			kHrs.
Function					
Short-circuit protection					Continuous, Auto Restart
UVLO protection					Option
CTRL Function					Option
Isolation voltage	60 sec.	8			kVdc
	60 sec.	4			kVac
Isolation capacitance			20		pF
Isolation resistance		10G			Ω
Creepage		8			mm
Safety Approvals					EN60950-1/ EN60601-1 3nd for 2MOPP
Physical					
Dimension					31.8(L)x20.3(W)x10.2(H) mm
Weight					14g
Cooling method					Free air convection
Base material					Non-conductive black plastic
Case material					Non-conductive black plastic
Potting material					Silicon (UL94V-0)
Vibration					MIL-STD-810F
EMC					
EMI	EN55022				CLASS A/B
ESD	EN61000-4-2, Air±15kV; Contact±8kV				Perf. Criteria A
Radiated immunity	EN61000-4-3, 10 V/m				Criteria A
Fast transient	EN61000-4-4, ± 2kV				Criteria A
Surge	EN61000-4-5, ± 1kV				Criteria A
Conducted immunity	EN61000-4-6, 10 Vr.m.s				Criteria A

*The EMI class A without external circuit, the class B suggestion circuit, please contact our sales.

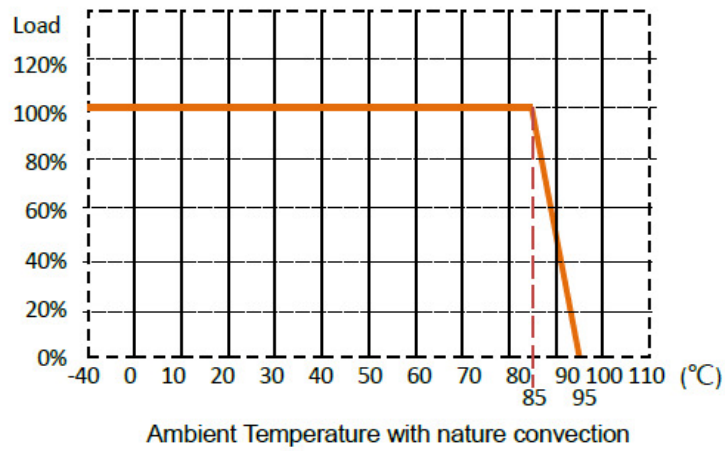
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■ **Ripple & Noise measure method**

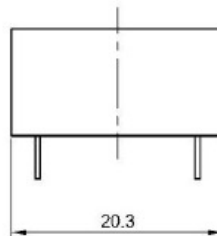
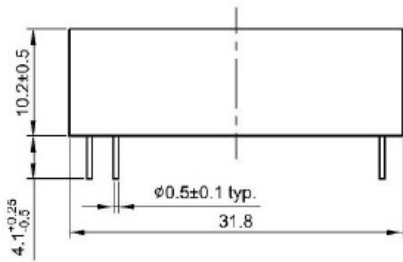
*Measured with 20MHz bandwidth and 0.1uF ceramic capacitor



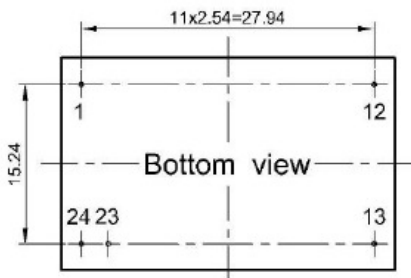
■ **Derating Curve**



■ **Mechanical Dimension & Pinning**

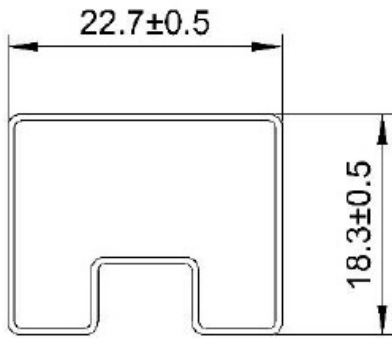


Pin	function
1	+Vin
12	-Vout
13	+Vout
23	-Vin
24	-Vin



Projection : Third angle projection
Unit : mm
Tolerance : ±0.25mm

■ Package



UNIT:mm
1 Tube = 15 pcs
Length:520±2mm