

FEATURES

- ◆ RoHS compliant
- ◆ 4 Pin SIP or 7 Pin SIP Package Style
- ◆ Low ripple and noise
- ◆ High efficiency up to 78%
- ◆ Operating temperature -40°C to +85°C
- ◆ Input / Output isolation 1000VDC
- ◆ Pin compatible with multiple Manufacturers

MODEL SELECTION

RSM^①05^②03^③X^④S^⑤ RSM^①05^②03^③X^④LS^⑥

- ① Product Series
- ② Input Voltage
- ③ Output Voltage
- ④ Fixed Input
- ⑤ SIP4 Package
- ⑥ SIP7 Package

APPLICATIONS

1. Data sheet are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, data sheet are no longer controlled by microdc; refer to www.microdc.cn for the most current product specifications.
2. Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured.
3. Mechanical drawings and specifications are for reference only.
4. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.
5. microdc may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release.
6. This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this data sheet.
7. Warranty is in accordance with microdc's standard Terms of Sale available at www.microdc.cn.

Model Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (MA)	Isolation (VDC)	Max Capacitive Load (uF)	Efficiency (%)
RSM0503XS	4.5-5.5	3.3	30.3	1000	100	66
RSM0505XS	4.5-5.5	5	20	1000	100	66
RSM0507XS	4.5-5.5	7.2	13.8	1000	100	66
RSM0509XS	4.5-5.5	9	11	1000	100	68
RSM0512XS	4.5-5.5	12	8.33	1000	100	68
RSM0515XS	4.5-5.5	15	6.67	1000	100	68
RSM0518XS	4.5-5.5	18	5.56	1000	100	68
RSM0524XS	4.5-5.5	24	4.17	1000	100	70
RSM1203XS	10.8-13.2	3.3	30.3	1000	100	66
RSM1205XS	10.8-13.2	5	20	1000	100	67
RSM1207XS	10.8-13.2	7.2	13.8	1000	100	68
RSM1209XS	10.8-13.2	9	11	1000	100	68
RSM1212XS	10.8-13.2	12	8.33	1000	100	68
RSM1215XS	10.8-13.2	15	6.67	1000	100	69
RSM1218XS	10.8-13.2	18	5.56	1000	100	70
RSM1224XS	10.8-13.2	24	4.17	1000	100	72
RSM1505XS	13.5 - 16.5	5	20	1000	100	70
RSM2403XS	21.6-26.4	3.3	30.3	1000	100	67
RSM2405XS	21.6-26.4	5	20	1000	100	67
RSM2407XS	21.6-26.4	7.2	13.8	1000	100	67
RSM2409XS	21.6-26.4	9	11	1000	100	69
RSM2412XS	21.6-26.4	12	8.33	1000	100	69
RSM2415XS	21.6-26.4	15	6.67	1000	100	69
RSM2418XS	21.6-26.4	18	5.56	1000	100	69
RSM2424XS	21.6-26.4	24	4.17	1000	100	69
RSM0303XLS	3.0-3.6	3.3	30.3	1000	100	62
RSM0305XLS	3.0-3.6	5	20	1000	100	65
RSM0505XLS	4.5-5.5	5	20	1000	100	64
RSM0509XLS	4.5-5.5	9	11	1000	100	65
RSM0512XLS	4.5-5.5	12	8.33	1000	100	67
RSM0515XLS	4.5-5.5	15	6.67	1000	100	65
RSM1203XLS	10.8-13.2	3.3	30.3	1000	100	62
RSM1205XLS	10.8-13.2	5	20	1000	100	65
RSM1209XLS	10.8-13.2	9	11	1000	100	66
RSM1212XLS	10.8-13.2	12	8.33	1000	100	67
RSM1215XLS	10.8-13.2	15	6.67	1000	100	66
RSM2405XLS	21.6-26.4	5	20	1000	100	63
RSM2409XLS	21.6-26.4	9	11	1000	100	63
RSM2412XLS	21.6-26.4	12	8.33	1000	100	65
RSM2415XLS	21.6-26.4	15	6.67	1000	100	65
RSM2424XLS	21.6-26.4	24	4.17	1000	100	64

NOTE: All specifications in this data sheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.



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Input Specifications				
Parameters	Nominal	Typical	Maximum	Units
Voltage range	03	3.0-3.6		VDC
	05	4.5-5.5		
	12	10.8-13.2		
	15	13.5 - 16.5		
	24	21.6-26.4		
Filter	Capacitor			
Turn on transient process time			25	ms
Start up time		200		ms
Absolute maximum rating	5 Vin	7		VDC
	12 Vin	15		
	15 Vin	17		
	24 Vin	28		
Peak input voltage time		100		ms

General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	80		KHz
Operating temperature	Without derating	-40 to +85		°C
Storage temperature		-40 to +125		°C
Maximum case temperature			100	°C
Cooling	Free air convection			
Humidity			95	%
Case material	Non-conductive black plastic			
Weight	(RSM-XS)SIP 4	1.5		g
	(RSM-XLS)SIP 7	2.1		g
Dimensions (Lx W x H)	RSM-XS(SIP4)	0.46 x 0.38 x 0.24 inches	11.68 x9.65 x6.00	mm
	RSM-XLS(SIP7)	0.772 x 0.374 x 0.24 inches	19.6 x 9.50 x6.00	mm
MTBF	>2 010 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25 °C)			

Output Specifications				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±3		%
Short circuit protection	Momentary (1sec)			
Line voltage regulation	For 1% change of Vin	±1.2		% of Vin
Load voltage regulation	Load 20 – 100%	±10		%
Load voltage regulation 3.3V output model	Load 20 – 100%	±20		%
Temperature coefficient		±0.02		%/ C
Ripple & noise	At 20MHz Bandwidth	100		mV p-p
Capacitive load			100	µF
Rising time		50		ms

Isolation Specifications

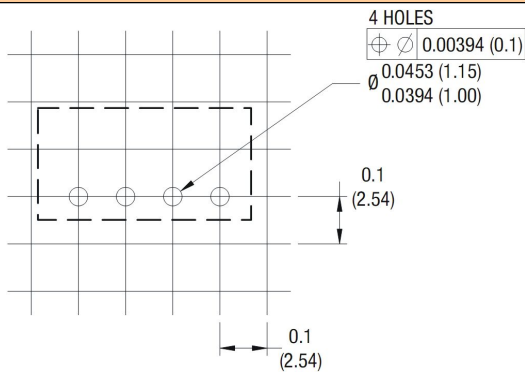
Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec		1000	VDC
Resistance		> 1000		MOhm
Capacitance		60		pF

Products Dimensions

RSM-XS	RSM-XLS
<p>Top view: 11.5 (0.46) width, 9.65 (0.38) height, 0.50 (0.02) pin offset, 2.54 (0.10) pin pitch, 3.05 (0.12) pin length.</p> <p>Side view: 6.00 (0.24) width, 10.15 (0.40) height, PRINTED FACE.</p> <p>Bottom view: 6.00 (0.24) width, 0.50 (0.02) pin offset, 1.25 (0.05) pin length, 0.50 (0.02) pin pitch, 0.30 (0.01) pin length.</p>	<p>Top view: 6.00 (0.236) width, 0.90 (0.035) height, 2.10 (0.083) pin offset, 2.54 (0.100) pin pitch, pins 1, 2, 4, 5, 6.</p> <p>Bottom view: 19.60 (0.772) width, 9.50 (0.374) height, 0.50 (0.020) pin offset, 4.10 (0.161) pin length.</p>
Unit:mm(inch) Pin section tolerances: $\pm 0.10\text{mm}$ ($\pm 0.004\text{inch}$) General tolerances: $\pm 0.25\text{mm}$ ($\pm 0.010\text{inch}$)	Unit:mm(inch) Pin section tolerances: $\pm 0.10\text{mm}$ ($\pm 0.004\text{inch}$) General tolerances: $\pm 0.25\text{mm}$ ($\pm 0.010\text{inch}$)

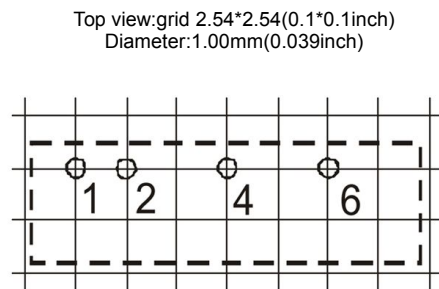
Recommended footprint details

4 PIN SIP Package



Recommended footprint details

7 PIN SIP Package



Pin Out Specifications

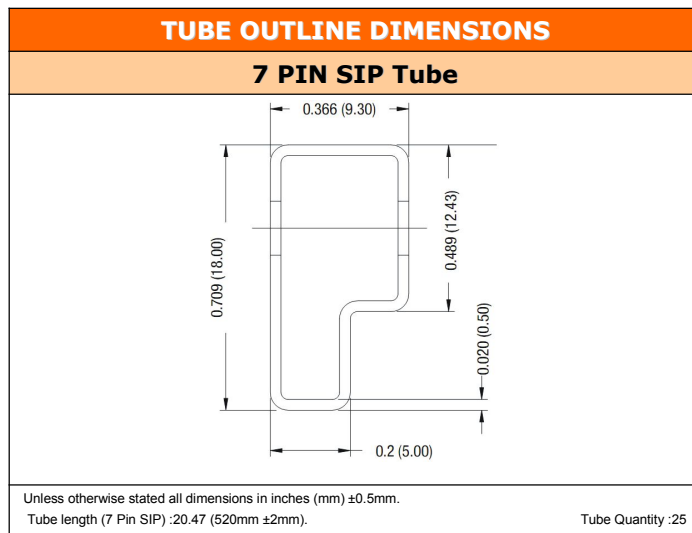
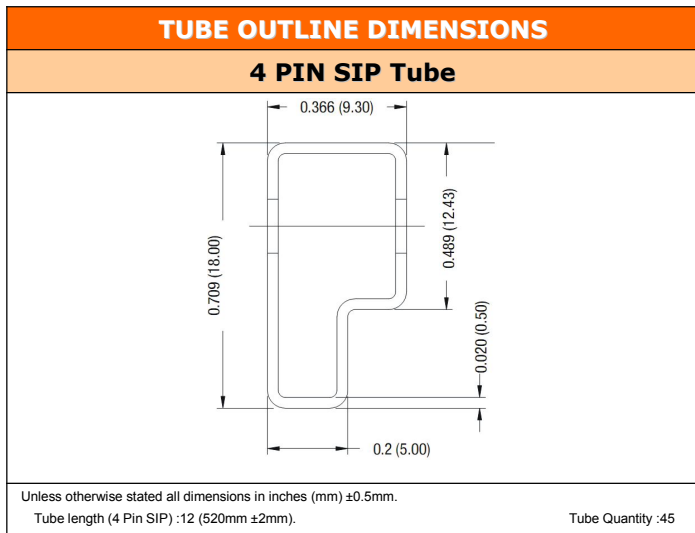
RSM-XS

Pin	Single
1	-V Input
2	+V Input
3	-V Output
4	+V Output

Pin Out Specifications

RSM-XLS

Pin	Single
1	+V Input
2	-V Input
4	-V Output
6	+V Output



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RoHS COMPLIANT INFORMATION

This series is compatible with RoHS soldering systems with a peak wave solder temperature of 300°C for 10 seconds. The pin termination finish on the SIP package type is Tin Plate, Hot Dipped over Matte Tin with Nickel Preplate. The DIP types are Matte Tin over Nickel Preplate. Both types in this series are backward compatible with Sn/Pb soldering systems.



REACH COMPLIANT INFORMATION

This series has proven that this product does not contain harmful chemicals, it also has harmful chemical substances through the registration, inspection and approval.