

TECHNICAL DATA
DATA SHEET 2057, REV. A

DC-DC Converters

Fixed Input, 1000V Isolation, Unregulated, Single/Dual Output, Micro-Package

FEATURES:

- Isolation Voltage: 1000Vdc
- Isolation Resistance (1): 1000MΩ
- Short-Circuit Duration: 1 second
- Case Temperature Rise: Max. 25°C, Typ. 15°C
- Cooling Method: Free-Air Cooling
- Operating Temp.: -40°C ~ + 85°C
- Storage Temp.: -55°C ~ + 125°C
- Humidity: ≤ 95%
- Soldering Temp. (2): 300°C
- Case Material: Non-Flammable Material (UL94-V0)
- Mean Time Before Failure: > 1,000,000 hours (Operating Temp. 25°C)

M (U) Single/Dual Output Micro Package Series Input Characteristics

Part Number	Nominal Input Voltage	Input Voltage Range	Maximum Input Voltage*
M05XXH/GM1/2U	5Vdc	4.5~5.5Vdc	7Vdc
M12XXH/GM1/2U	12Vdc	10.8~13.2Vdc	15Vdc
M24XXH/GM1U	24Vdc	21.6~26.4Vdc	28Vdc

* Voltage above this value may cause permanent damage to the device.

M (U) Single/Dual Output Micro Package Series Output Characteristics

Parameter	MIN	TYP	MAX	Units
1W Output Power			1	W
2W Output Power			2	W
Line Regulation		1.0		%
Efficiency at 100% Load	65	75	85	%
Temperature Coefficient			0.03	%/°C
Load Regulation	5V Output	10	12	%
	9V Output	6.5	8.0	
	12V Output	6.0	8.5	
	15V Output	6.0	7.5	
Ripple and Noise	5V Output	50	75	mVp-p
	9V Output	40	65	
	12V Output	40	60	
	15V Output	40	60	
Switching Frequency	80	100	200	KHz

1. All specifications at T_A=25°C, 75% of the humidity, Nominal input voltage, full output load unless otherwise specified.
2. Soldering for 10 seconds at 1.5mm away from the edge.

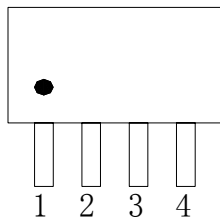
TECHNICAL DATA
DATA SHEET 2057, REV. A

M (U) Single-Dual Series Part Number List

Input	Output	Power	Single-1W	Single-2W	Dual-1W
5Vdc	5V/200mA	1.00 W	M0505HM1U	M0505HM2U	M0505GM1U
	9V/110mA		M0509HM1U	M0509HM2U	M0509GM1U
	12V/84mA		M0512HM1U	M0512HM2U	M0512GM1U
	15V/65mA		M0515HM1U	M0515HM2U	M0515GM1U
12Vdc	5V/400mA	1.00 W	M1205HM1U	M1205HM2U	M1205GM1U
	9V/220mA	2.00 W	M1209HM1U	M1209HM2U	M1209GM1U
	12V/167mA	2.00 W	M1212HM1U	M1212HM2U	M1212GM1U
	15V/133mA	2.00 W	M1215HM1U	M1215HM2U	M1215GM1U
		1.00 W			
24Vdc	± 5V/100mA	1.00 W	M2405HM1U		M2405GM1U
	± 9V/55mA	1.00 W	M2409HM1U		M2409GM1U
	± 12V/42mA	1.00W	M2412HM1U		M2412GM1U
	± 15V/33mA		M2415HM1U		M2415GM1U

PIN CONFIGURATION

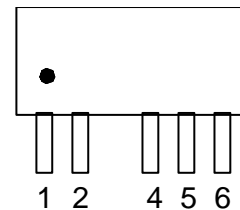
MxxyyHM1U/2U PACKAGE DIMENSIONS



PIN CONFIGURATION

Pin	Function
1	GND
2	Vin
3	0V
4	+Vo

MxxyyGM1U PACKAGE DIMENSIONS

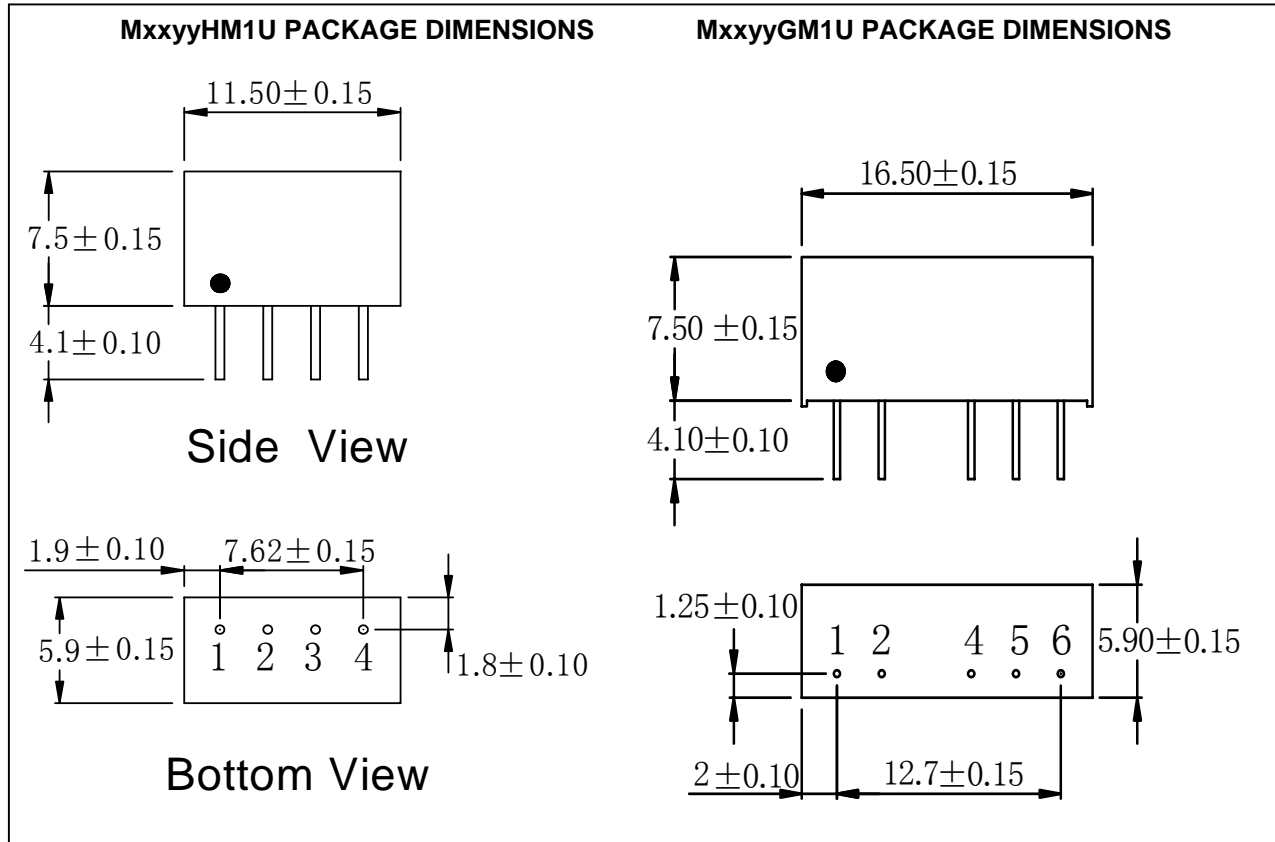


PIN CONFIGURATION

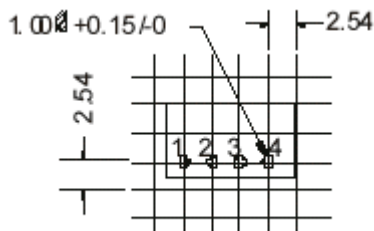
Pin	Function
1	Vin
2	GND
4	-Vo
5	0V
6	+Vo

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DATA SHEET 2057, REV. A

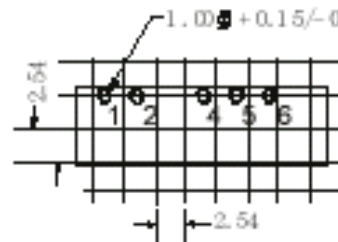
Mechanical Dimension: in mm



DIMENSIONAL RECOMMENDATIONS FOR PCB LAYOUT

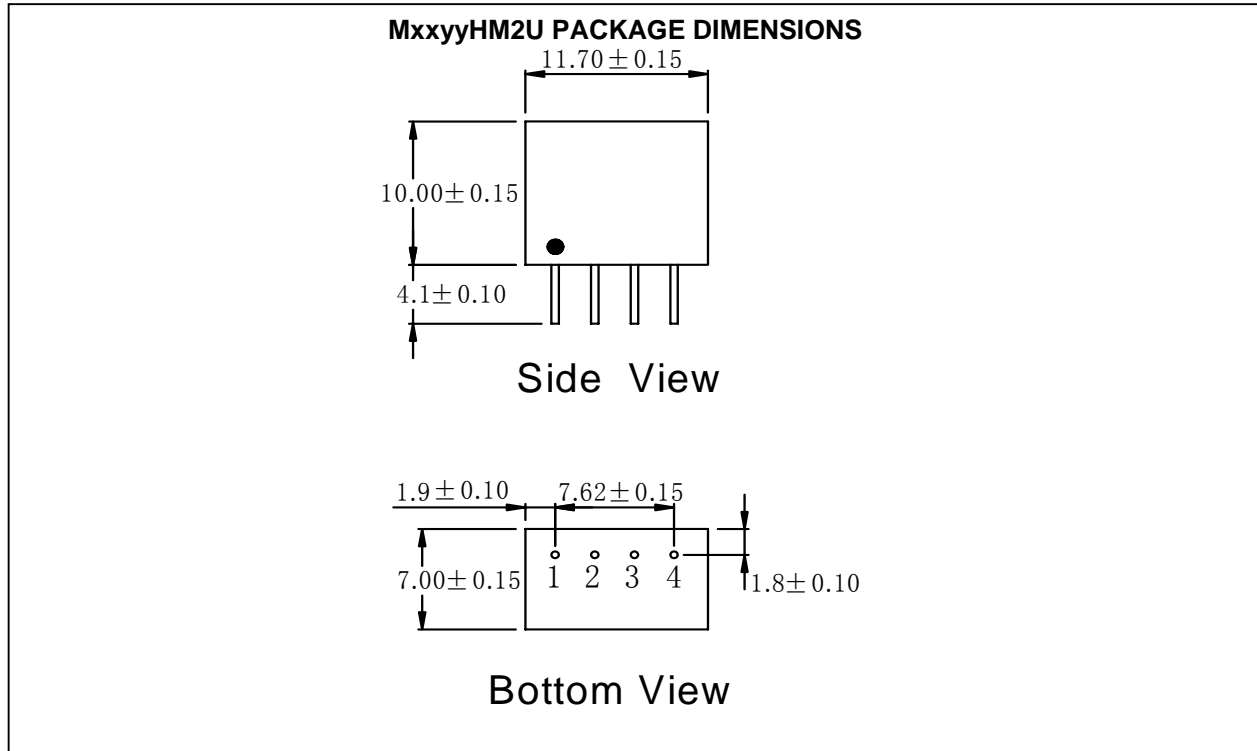


SIP PACKAGE DIMENSIONS

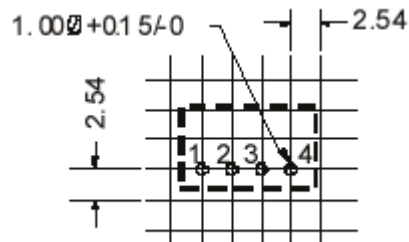


SIP PACKAGE DIMENSIONS

Mechanical Dimension: in mm



DIMENSIONAL RECOMMENDATIONS FOR PCB LAYOUT



SIP PACKAGE DIMENSIONS

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