

# EPM6-1V

## 1 Watt isolated DC-DC converter



### Product features

- 1 Watt isolated DC-DC converter
- Input voltage: 5 Vdc, 12 Vdc, and 24 Vdc
- Efficiency up to 84%
- Isolation voltage: 1 kVdc and 2 kVdc
- SIP4 package
- Operating ambient temperature from -40 °C to +90 °C
- No minimum load required
- IEC62368-1/ EN55032&35 certified

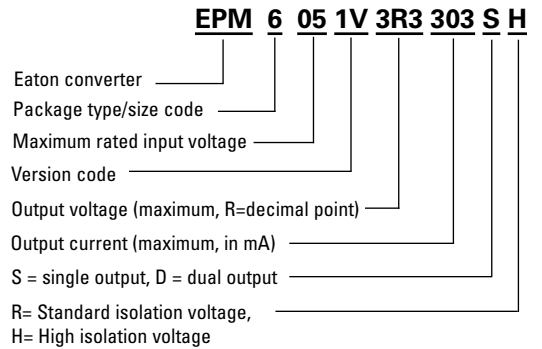
### Applications

- Computing/telecom
- Distributed power architectures
- Servers and workstations
- LAN /WAN applications
- Data processing applications
- Industrial IoT equipment, sensors
- Power supply, battery backup
- Wireless TX/RX modules
- Renewable energy products

### Environmental compliance



### Ordering part number



Powering Business Worldwide

**Specifications**

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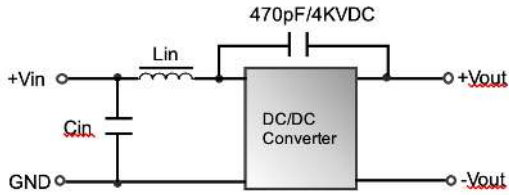
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Part number	Input voltage (Vdc)	Output voltage (Vdc)	Output current @ full load (mA)	Efficiency <sup>1</sup> minimum	Efficiency <sup>1</sup> typical	Capacitive load <sup>2</sup> maximum (µF)
EPM6051V-3R3-303S*	5	3.3	303	71%	74%	1500
EPM6051V-05R-200S*	5	5	200	75%	78%	1500
EPM6051V-12R-084S*	5	12	84	75%	78%	470
EPM6051V-15R-067S*	5	15	67	80%	83%	220
EPM6121V-3R3-303S*	12	3.3	303	76%	79%	1500
EPM6121V-05R-200S*	12	5	200	79%	82%	1500
EPM6121V-12R-084S*	12	12	84	77%	80%	470
EPM6121V-15R-067S*	12	15	67	78%	81%	220

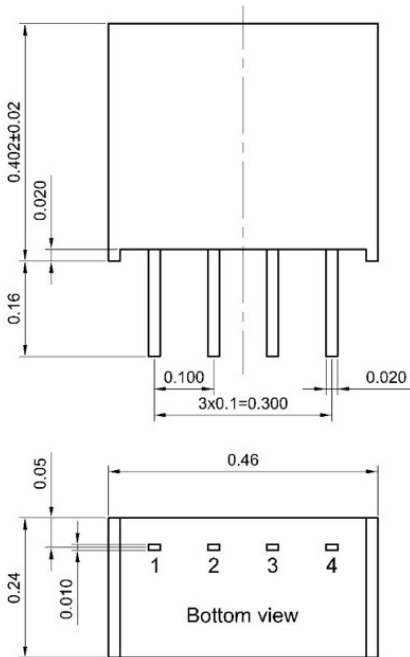
**Derating curve**

**EMC filtering circuit**



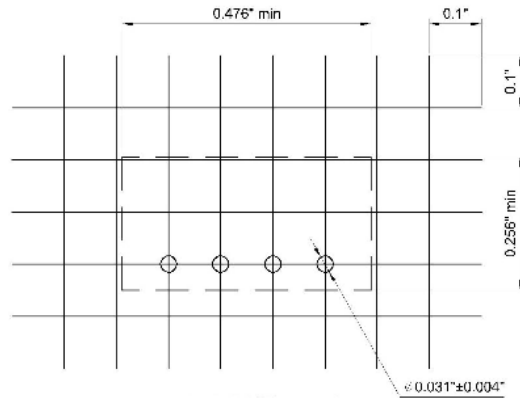
Class	5 Vin	12 Vin	24 Vin
Class A	47 $\mu$ H/ 2.2 $\mu$ F	22 $\mu$ H/ 2.2 $\mu$ F	22 $\mu$ H/ 2.2 $\mu$ F
Class B	47 $\mu$ H/ 10 $\mu$ F	22 $\mu$ H/ 4.7 $\mu$ F	47 $\mu$ H/ 4.7 $\mu$ F

**Dimensions - inches**

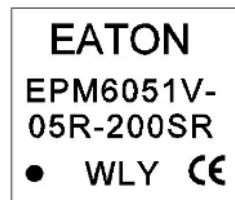


Projection: Third angle projection  
Unit: inch  
PIN tolerance:  $\pm 0.004$   
Tolerance: X.XX  $\pm 0.02$  X.XXX  $\pm 0.01$

**Recommended PCB layout**



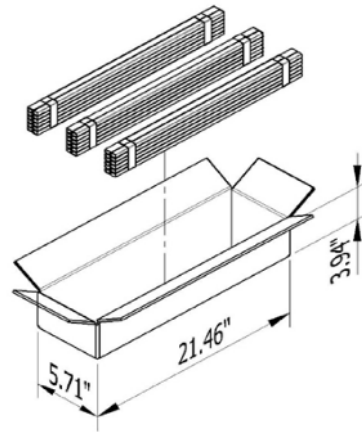
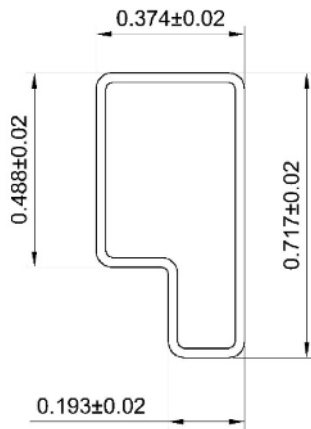
**Marking**



WLY = lot code

Pin	Single
1	-Vin
2	+Vin
3	-Vout
4	+Vout

**Packaging- Inches**



Unit: inch  
1 tube = 41 pieces  
Length:  $20.47 \pm 0.08$

Carton =  $21.46 * 5.71 * 3.94$  inch  
 $41$  (pieces/tube) \*  $12$  (tube/bundle) \*  $3$  (bundle) =  $1476$  pieces

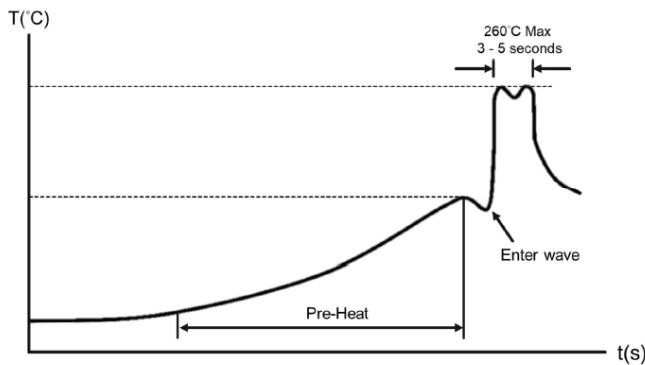
## General information

### Storage and handling

The shelf life will be a minimum of 36 months, when stored at the following conditions: < +40 °C, < 90% RH.

### Wave solder profile

The wave solder profile is measured based on lead temperature. The recommended PCB pre-heat temperature is +80 °C to +100 °C, and the preheat rate of 1.5 to 2.5 °C/sec. The underside PCB temperature at the last pre-heat zone should be approximately +150 °C. The internal temperature of the solder parts should not exceed +210 °C. The duration of solder dwell time should be between 3 to 5 seconds, and not to exceed 10 seconds at a temperature of +260 °C maximum.



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