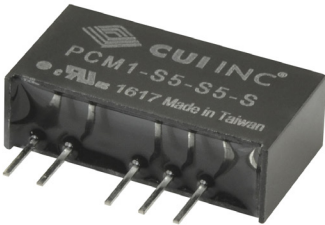




SERIES: PCM1-S | DESCRIPTION: DC-DC CONVERTER

FEATURES

- up to 1 W isolated output
- industry standard SIP 7 package
- 1:1 input range
- single unregulated output
- 1,000 Vdc isolation voltage
- -40 to 85°C temperature range
- efficiency up to 76%
- UL/cUL safety approval

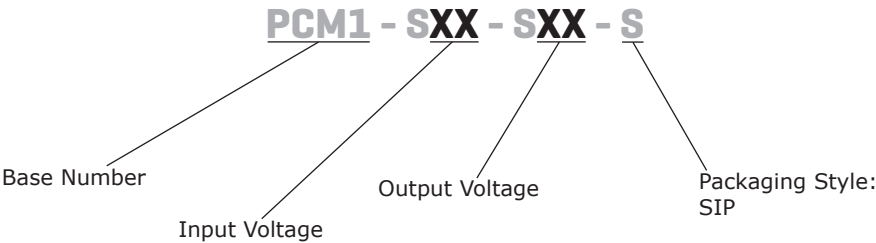


MODEL

|              | input voltage |             | output voltage | output current | output power | ripple & noise <sup>1</sup> | efficiency |
|--------------|---------------|-------------|----------------|----------------|--------------|-----------------------------|------------|
|              | typ (Vdc)     | range (Vdc) | (Vdc)          | max (mA)       | max (W)      | max (mVp-p)                 | typ (%)    |
| PCM1-S5-S5-S | 5             | 4.5~5.5     | 5              | 200            | 1            | 100                         | 76         |

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, output terminated with a 0.1  $\mu$ F multilayer low ESR ceramic capacitor.  
2. All specifications measured at Ta=25°C, nominal input voltage, rated output load, and after warm up unless otherwise specified.

PART NUMBER KEY



## INPUT

| parameter               | conditions/description | min | typ | max | units |
|-------------------------|------------------------|-----|-----|-----|-------|
| operating input voltage |                        | 4.5 | 5   | 5.5 | Vdc   |

## OUTPUT

| parameter                            | conditions/description                                   | min | typ  | max  | units |
|--------------------------------------|----------------------------------------------------------|-----|------|------|-------|
| maximum capacitive load <sup>1</sup> |                                                          |     |      | 1000 | μF    |
| voltage accuracy                     | at full load, Vin nominal, see tolerance envelope curves |     |      | ±5   | %     |
| line regulation                      | measured from low to high line, full load                |     | ±1.2 |      | %     |
| load regulation                      | measured from 20~100% load                               |     |      | 10   | %     |
| switching frequency                  | at Vin nominal                                           | 50  | 82   | 105  | kHz   |

Note: 1. Maximum capacitive load is tested at nominal input voltage and full load.

## SAFETY AND COMPLIANCE

| parameter             | conditions/description                                                         | min                  | typ | max | units          |
|-----------------------|--------------------------------------------------------------------------------|----------------------|-----|-----|----------------|
| isolation voltage     | input to output for 1 second                                                   | 1,000                |     |     | Vdc            |
| isolation resistance  | at 500 Vdc                                                                     | 10,000               |     |     | MΩ             |
| isolation capacitance |                                                                                |                      |     | 75  | pF             |
| safety approvals      | UL/cUL (60950-1, 2nd Edition)                                                  |                      |     |     |                |
| MTBF                  | as per MIL-HDBK-217F, full load, 25°C<br>as per MIL-HDBK-217F, full load, 85°C | 2,400,000<br>650,000 |     |     | hours<br>hours |
| RoHS                  | 2011/65/EU                                                                     |                      |     |     |                |

## ENVIRONMENTAL

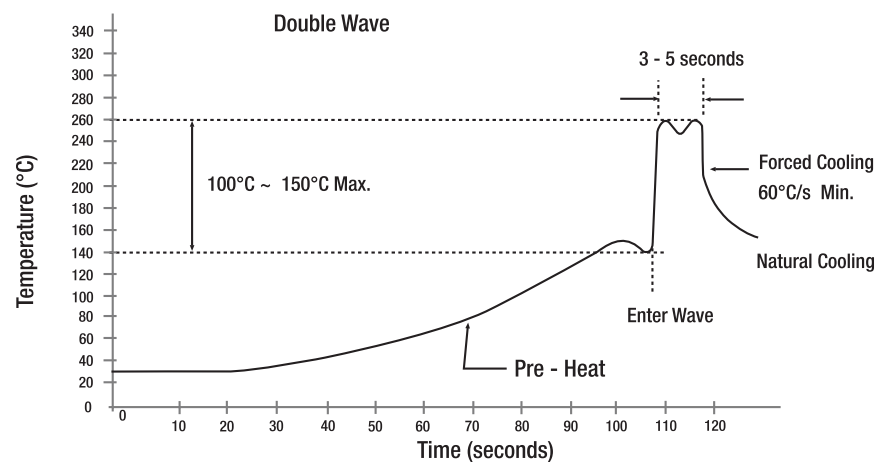
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | -40 |     | 85  | °C    |
| storage temperature   |                        | -55 |     | 125 | °C    |
| operating humidity    | non-condensing         |     |     | 95  | %     |

## SOLDERABILITY

| parameter      | conditions/description  | min | typ | max | units |
|----------------|-------------------------|-----|-----|-----|-------|
| wave soldering | see wave solder profile |     |     | 260 | °C    |

Note: 2. The wave solder profile is measured on lead temperature.  
3. Need to keep the solder parts internal temperature less than about 210°C.

### Lead-free Recommended Soldering Profile



## MECHANICAL

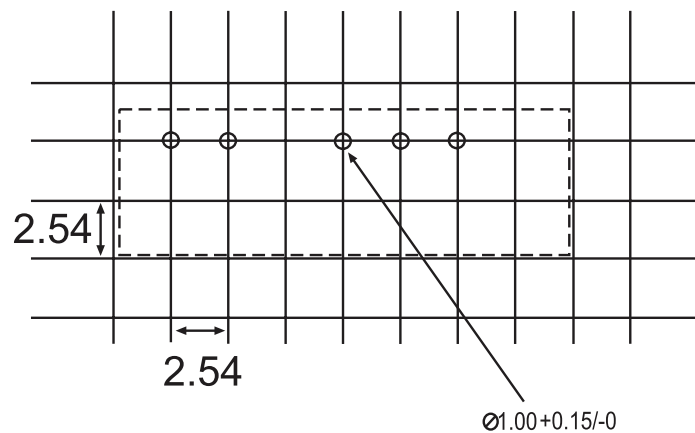
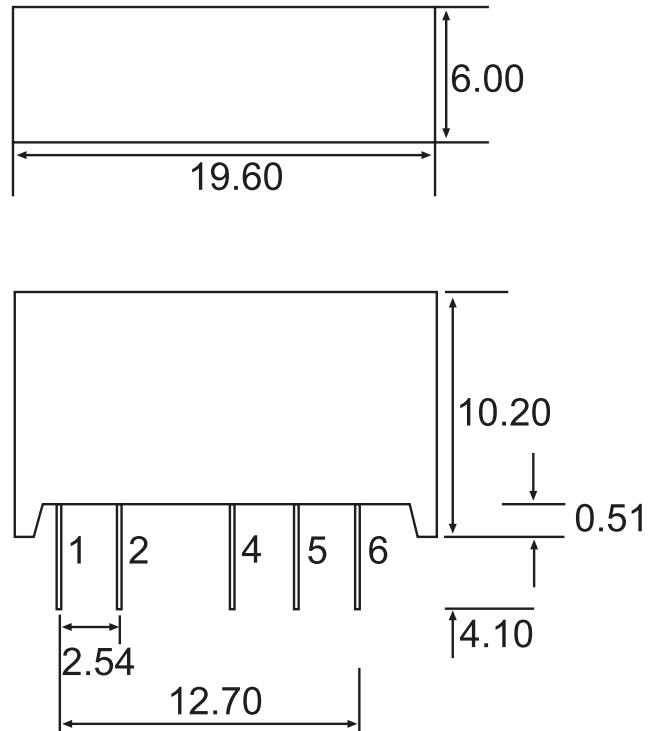
| parameter     | conditions/description                 | min | typ | max | units |
|---------------|----------------------------------------|-----|-----|-----|-------|
| dimensions    | 19.60 x 6.00 x 10.20                   |     |     |     | mm    |
| case material | non-conductive black plastic (UL94V-0) |     |     |     |       |
| weight        |                                        |     | 2.2 |     | g     |

## MECHANICAL DRAWING

units: mm  
tolerance:  $\pm 0.25$  mm

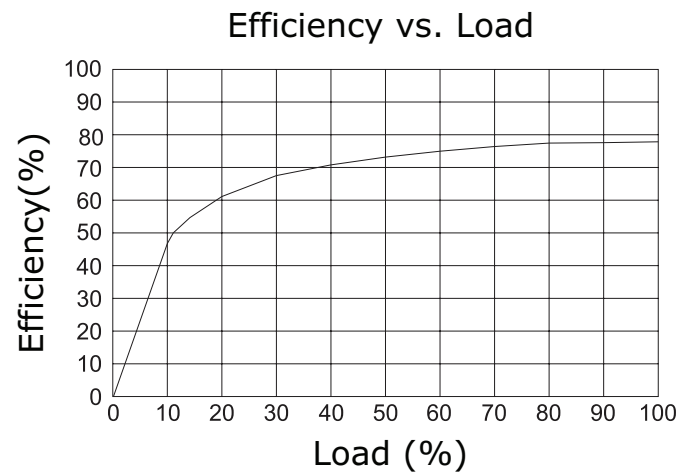
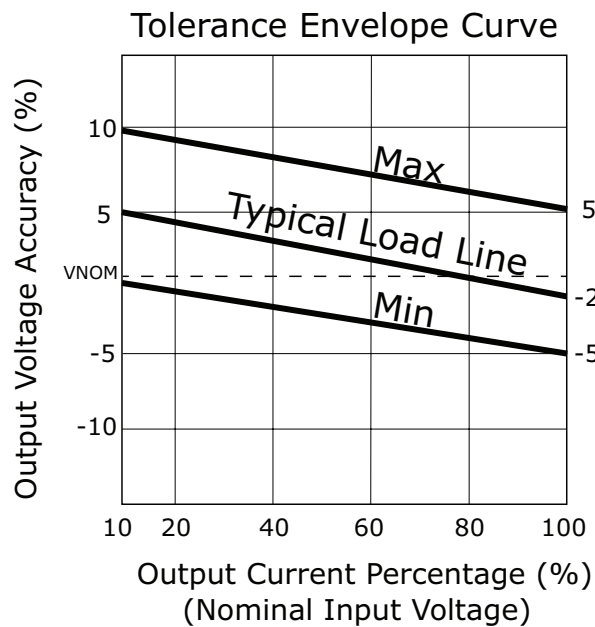
| PIN CONNECTIONS |          |
|-----------------|----------|
| PIN             | Function |
| 1               | +Vin     |
| 2               | -Vin     |
| 4               | NC       |
| 5               | -Vout    |
| 6               | +Vout    |

NC = no connection



Recommended PCB Layout  
Top View

## PERFORMANCE CURVES

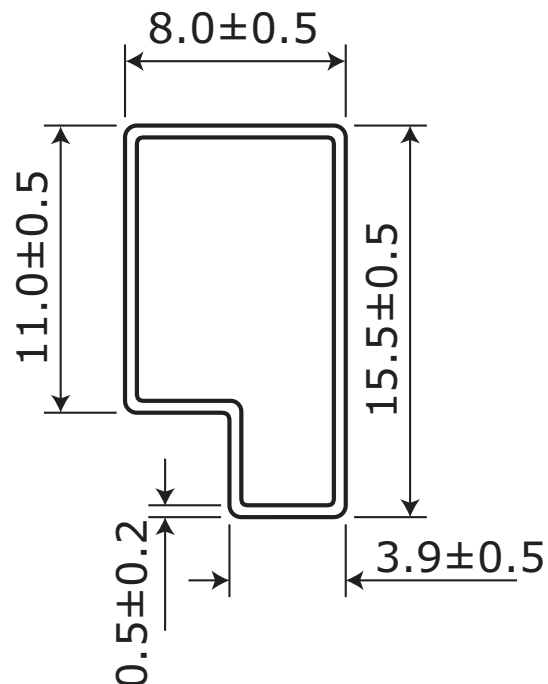


## PACKAGING

units: mm

Tube Size: 15.5 x 8 x 520 mm

QTY: 25 pcs



## REVISION HISTORY

| rev. | description     | date       |
|------|-----------------|------------|
| 1.0  | initial release | 07/25/2016 |

The revision history provided is for informational purposes only and is believed to be accurate.



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CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

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