

**Features**

- 20 WATT DIL PACKAGE
- 4:1 WIDE INPUT VOLTAGE
- EFFICIENCY TO 86%
- PI INPUT FILTER
- 100% BURNED IN
- UL 94V-0 PACKAGE MATERIAL
- CUSTOMIZED SOLUTIONS AVAILABLE
- REGULATED OUTPUT TYPE



**20 Watt DC/DC  
Converter**

WIDE INPUT VOLTAGE RANGE  
20 WATT DC-DC CONVERTER

**Input Specifications**

|                     |   |   |
|---------------------|---|---|
| Input Voltage       | :48Vdc  |   |
| Input Voltage Range | :18~75Vdc   |   |
| Remote ON/OFF       | :Open or 3~12Vdc(DC/DC ON)<br>:Short or 0~1.2Vdc(DC/DC OFF) | @Positive logic (Standard)<br>(Refer to -Vin PIN) |
|                     | : -0.5 ~ +0.5 mA  | @Input current of Remote ON/OFF pin               |
|                     | :3 mA TYP   | @Remote off input current                         |

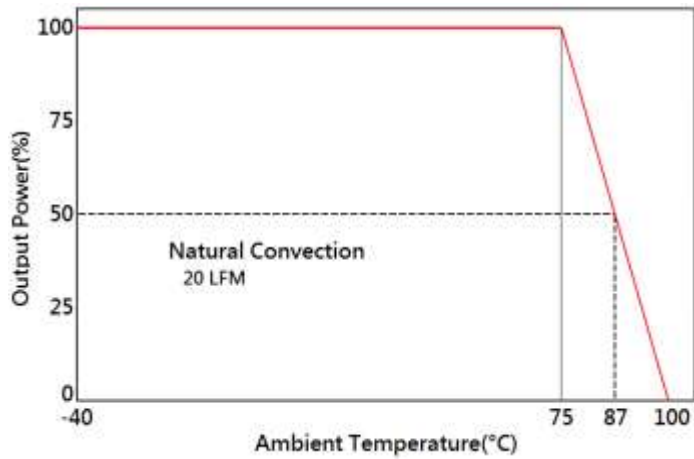
**Output Specifications**

|                          |               |                                   |
|--------------------------|---------------|-----------------------------------|
| Output Voltage           | :24Vdc        |                                   |
| Output Voltage Accuracy  | :±2%          | @Vout=23.52~24.48Vdc@Vin=18~75Vdc |
| Output Current           | :833mA        |                                   |
| Efficiency               | :86% TYP      | @Vin=48Vdc                        |
| Ripple / Noise           | :240mVp-p MAX | @20MHz Bandwidth With 10uF MLCC*1 |
| Short Circuit Protection | :Continuous   | @Hiccup, auto-recovery            |
| Line Regulation          | :±0.5% MAX    | @LL to HL at Full Load            |
| Load Regulation          | :±0.5% MAX    | @25%FL to 100%FL                  |

**General Specifications**

|                             |                                |   |
|-----------------------------|--------------------------------|---|
| Operating Temperature Range | :-40°C ~ +87°C (With derating) | Output load derate 4% per degree Celsius above 75°C as refer to temperature derating graph. |
| Storage Temperature         | :-55°C ~ +125°C                |   |
| Switching Frequency         | :330KHz TYP                    |   |
| Humidity                    | :95% MAX                       |   |
| Isolation Voltage           | :3000Vdc                       |   |
| Isolation Resistance        | :1000M Ω MIN                   |   |
| Cooling                     | :Natural Convection            | @20LFM  |
| MTBF                        | : >=1500000 Hours              | MIL-HDBK-217F@25°C,Ground Benign.   |
| Case Material               | :Six-side shielded case        |   |
| Weight                      | :30g TYP                       |   |
| Conducted Emission          | :EN50155                       |   |
| Radiated Emission           | :EN50155                       |   |

Temperature Derating Graph



Part Number

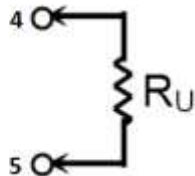
**98DW20-** **48** **S** **24** **R** **3** **NL**  
**A** **B** **C** **D** **E** **F** **G**

- A: Series**
- B: Input Voltage**
- C: Single Output**
- D: Output Voltage**
- E: Regulated(R)**
- F: Package**
- G: RoHS Version**

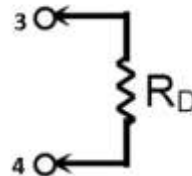
External Output Trimming

Output can be externally trimmed by using the method shown below.

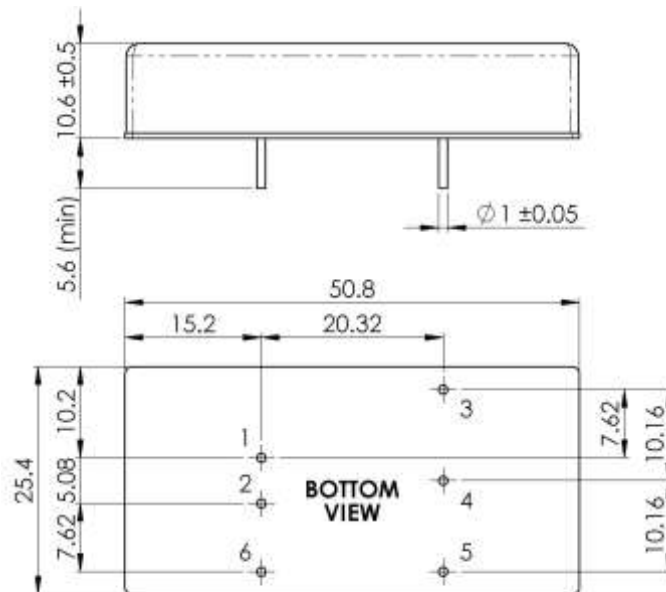
TRIM UP



TRIM DOWN



Outline Dimensions

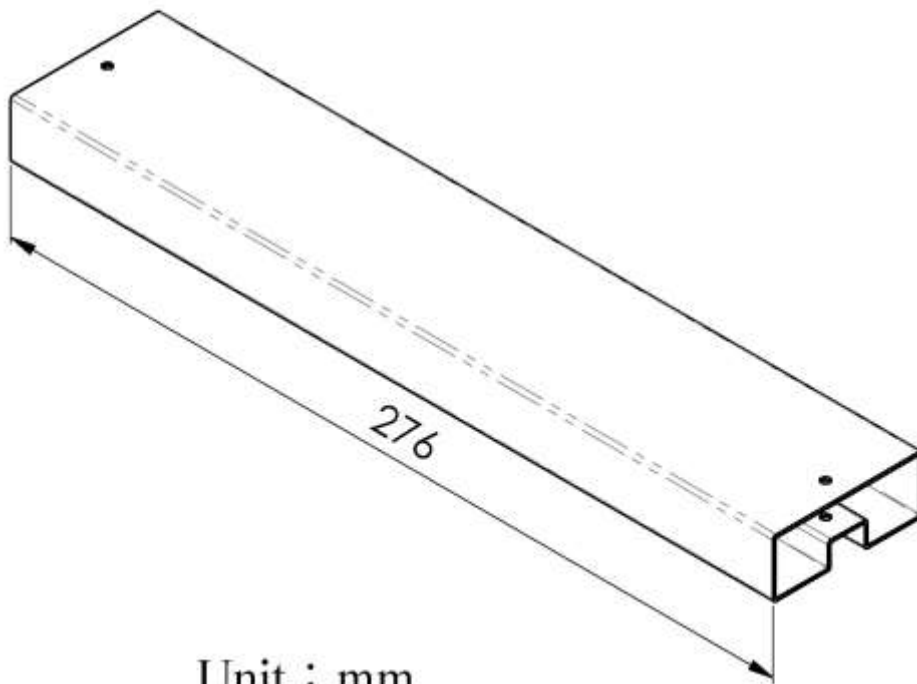
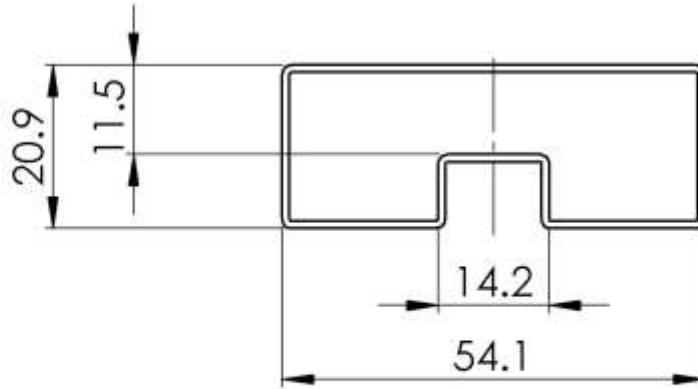


Unit : mm  
 Tolerance : XX.X ± 0.5 , XX.XX ± 0.25

PIN Assignment

| PIN      | 1    | 2    | 3     | 4    | 5     | 6             |
|----------|------|------|-------|------|-------|---------------|
| FUNCTION | +Vin | -Vin | +Vout | Trim | -Vout | Remote On/Off |

**Packing Formation**



Unit : mm

|               |                       |
|---------------|-----------------------|
| <b>Weight</b> | <b>: 30 grams/pcs</b> |
| <b>Tube</b>   | <b>: 10 pcs</b>       |