

**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	:110Vdc	
Input Voltage Range	:40~160Vdc	
Remote ON/OFF	:Open or 2~12Vdc(DC/DC ON) :Short or 0~1.2Vdc(DC/DC OFF)	@Positive logic (Standard) (Refer to -Vin PIN)
	: -0.5 ~ +0.5 mA	@Input current of Remote ON/OFF pin
	:3 mA TYP	@Remote off input current

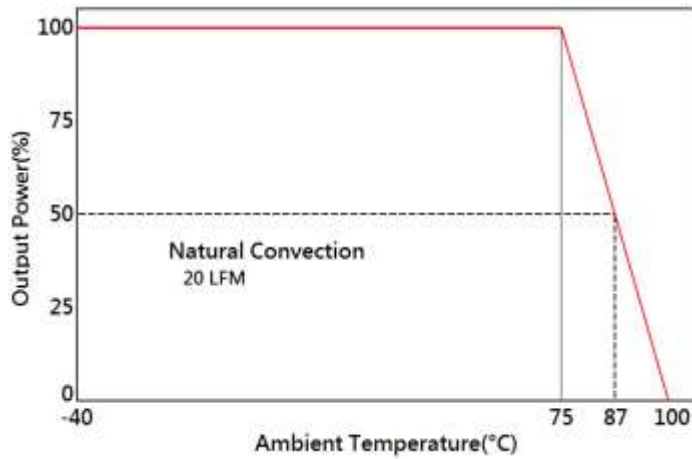
**Output Specifications**

Output Voltage	:±12Vdc	
Output Voltage Accuracy	:±2%	@Vout=±11.76~±12.24Vdc@Vin=40~160Vdc
Output Current	:±833mA	
Efficiency	:86% TYP	@Vin=110Vdc
Ripple / Noise	:100mVp-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
Over Voltage Protection	:±16.55V TYP	@±13.5V MIN ; ±19.6V MAX

**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**

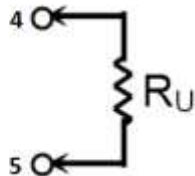
**98DW20- 110 D 12 R 3 NL**  
**A B C D E F G**

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

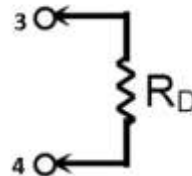
**External Output Trimming**

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

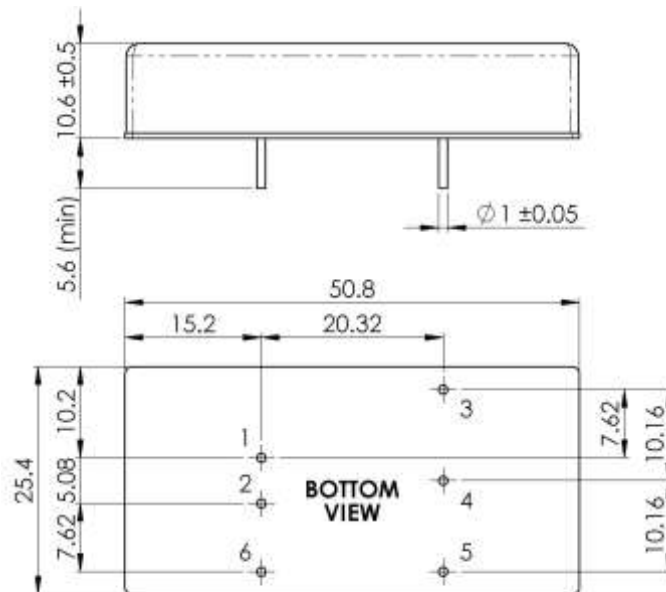
TRIM UP



TRIM DOWN



**Outline Dimensions**

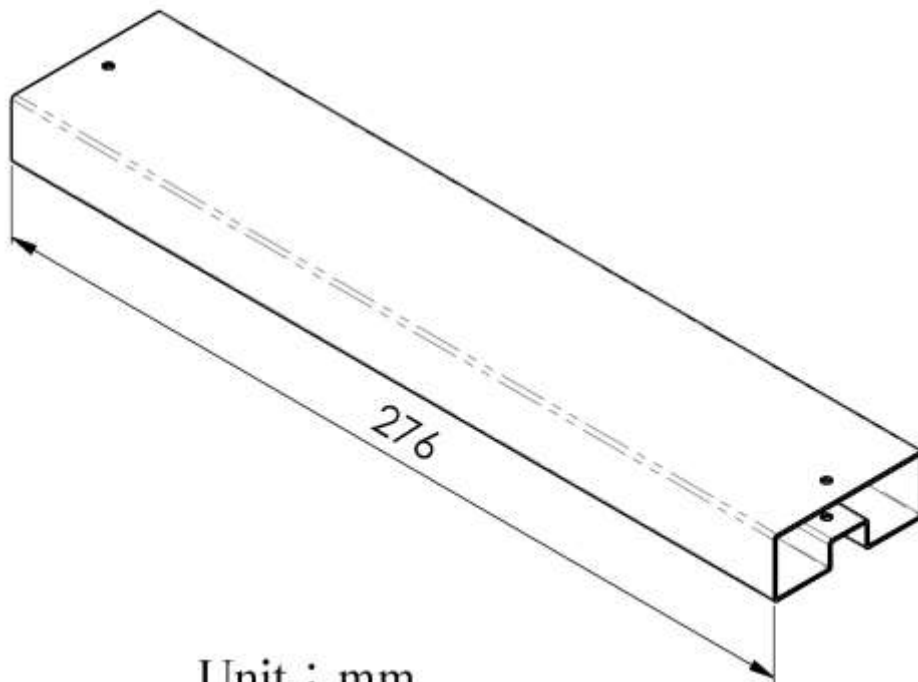
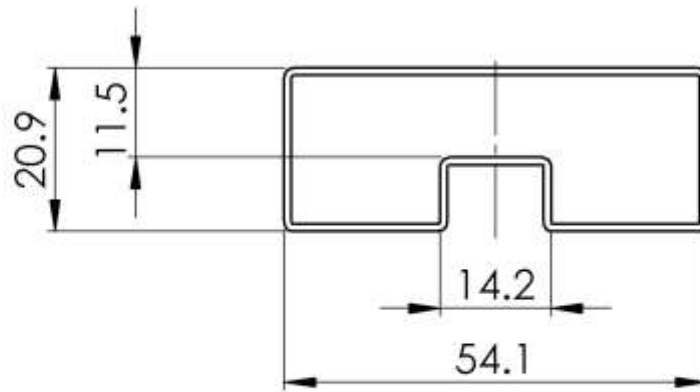


Unit : mm  
 Tolerance : XX.X ± 0.5 , XX.XX ± 0.25

**PIN Assignment**

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

**Packing Formation**



Unit : mm

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