

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

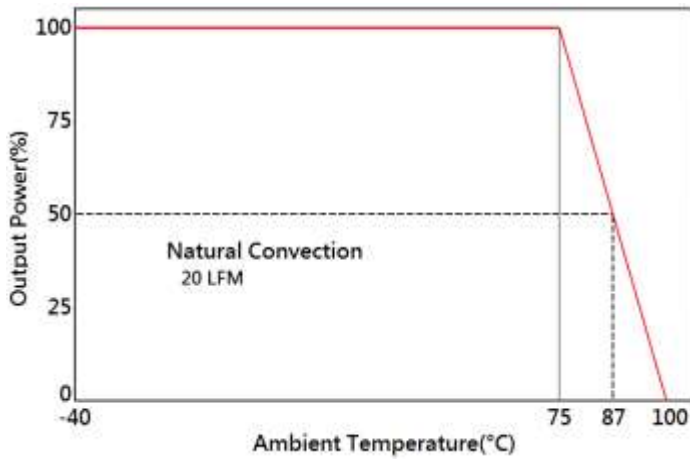
**Output Specifications**

Output Voltage	:12Vdc	
Output Voltage Accuracy	:±2%	@Vout=11.76~12.24Vdc@Vin=40~160Vdc
Output Current	:1670mA	
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

**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

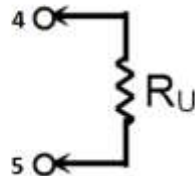
**98DW20-** **110** **S** **12** **R** **3** **NL**  
**A** **B** **C** **D** **E** **F** **G**

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

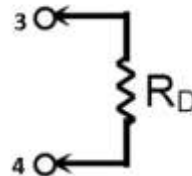
External Output Trimming

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

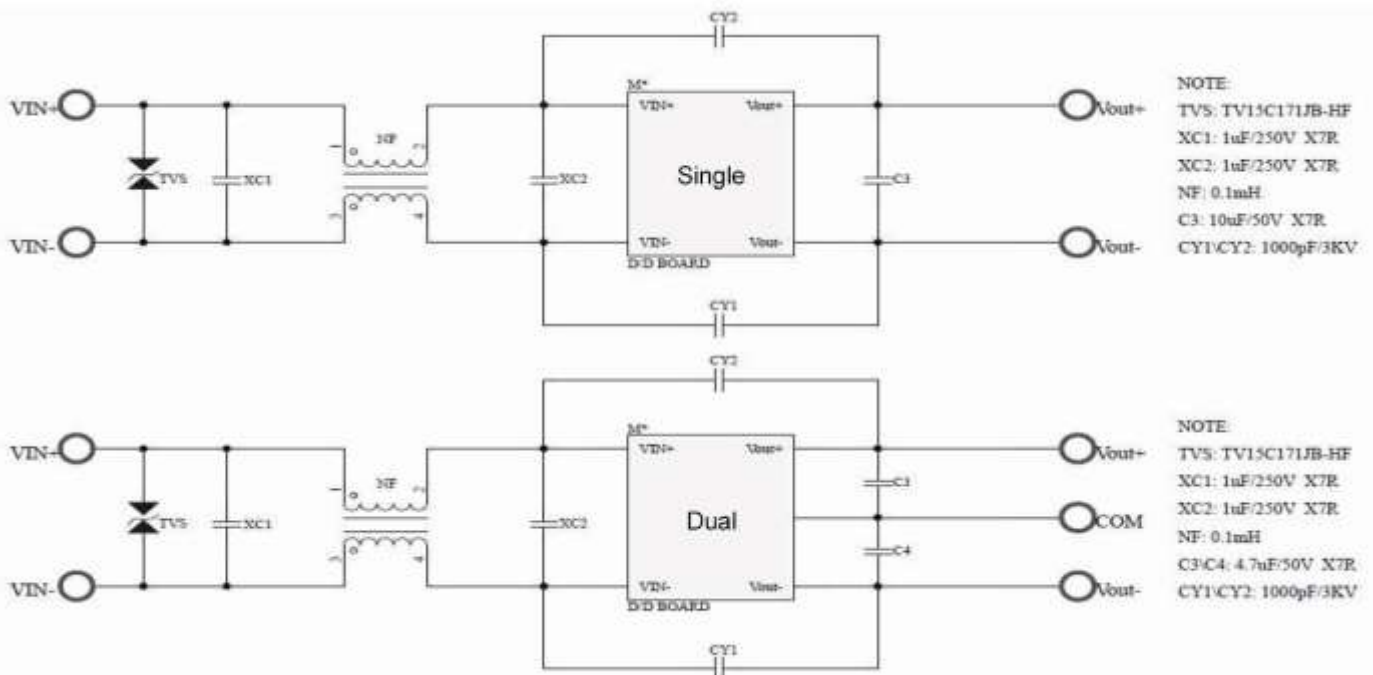
TRIM UP



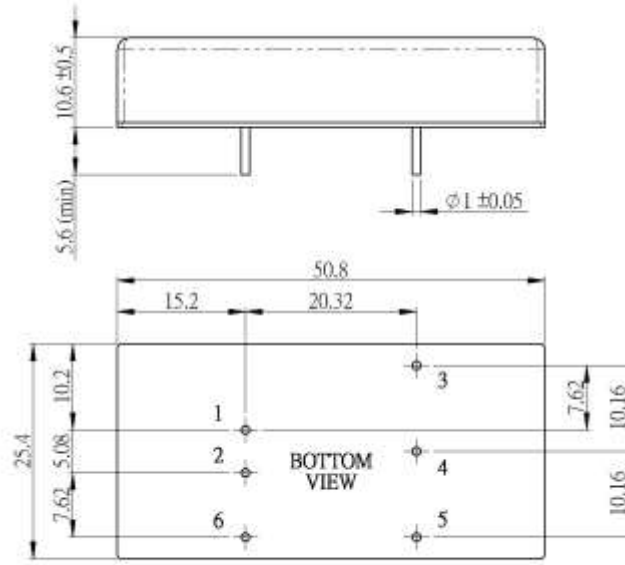
TRIM DOWN



Recommended Test Circuit



**Outline Dimensions**

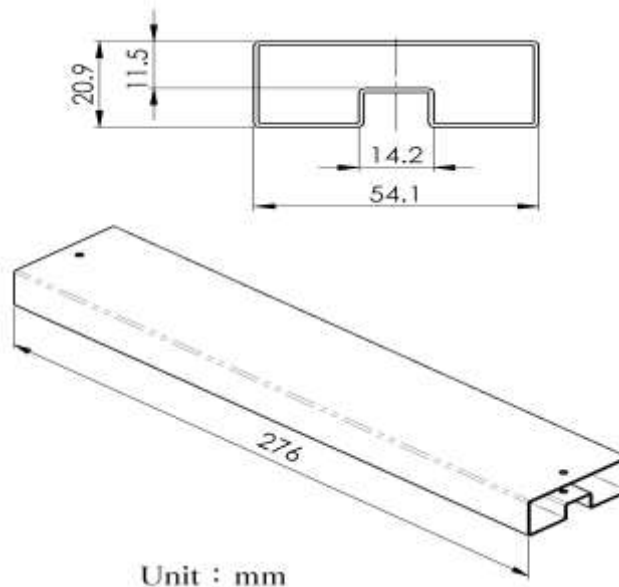


Unit : mm  
Tolerance : XX.X+0.5 , XX.XX+0.25

**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>
<b>Box</b>	<b>: 20Tube</b>
<b>Gross weight</b>	<b>: 8.1KG/200PCS/Box</b>