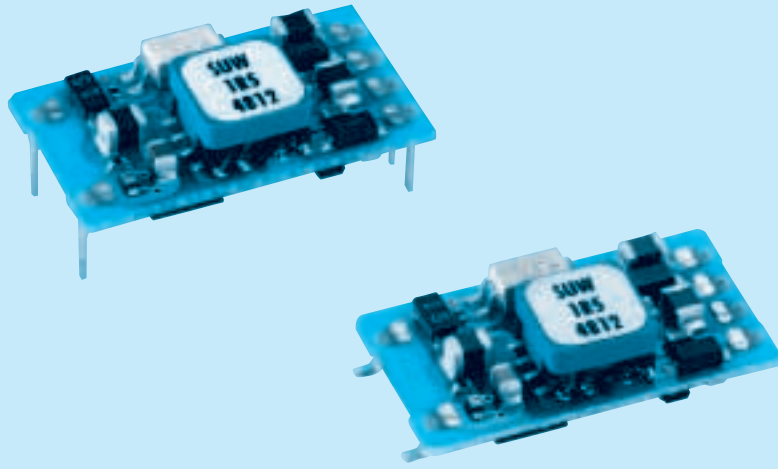


# SUW1R5

SU W 1R5 12 12 B P

① ② ③ ④ ⑤ ⑥ ⑦


  
**RoHS**



- ① Series name
- ② Dual output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Mounting type  
B :SMD  
C :DIP
- ⑦ Packing form  
Blank:Plastic cover  
P :Tray (SMD type)

MODEL	SUW1R50512	SUW1R50515	SUW1R51212	SUW1R51215	SUW1R52412	SUW1R52415	SUW1R54812	SUW1R54815	
<b>MAX OUTPUT WATTAGE[W]</b>	1.56	1.5	1.56	1.5	1.56	1.5	1.56	1.5	
<b>DC OUTPUT</b>	VOLTAGE[V] *1	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30
	CURRENT[A]	0.065	0.05	0.065	0.05	0.065	0.05	0.065	0.05

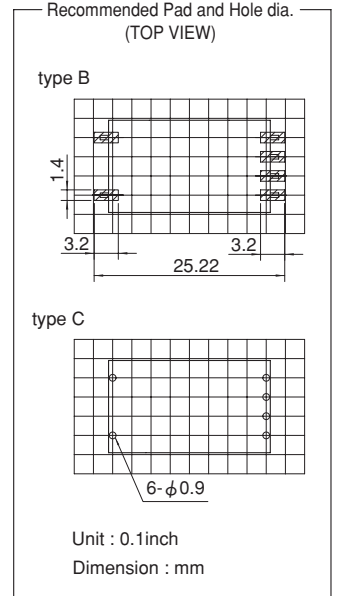
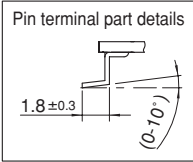
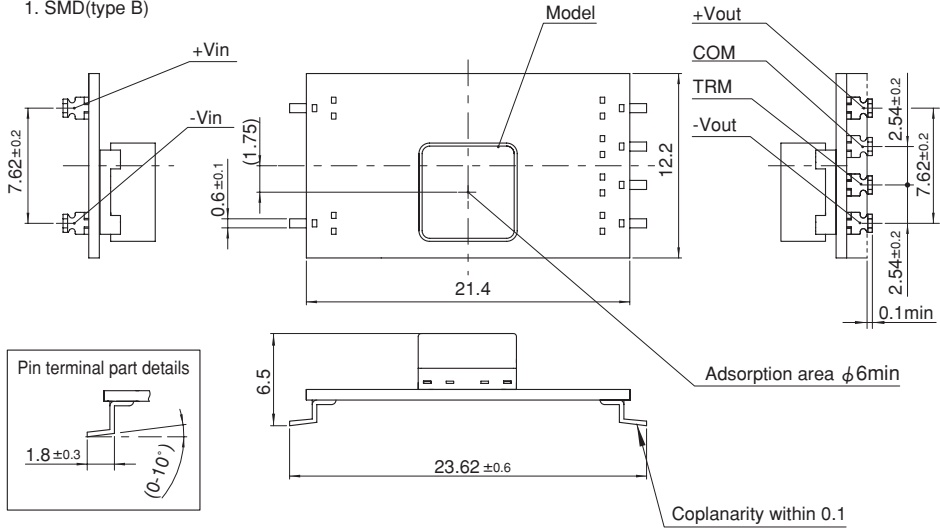
## SPECIFICATIONS

	MODEL	SUW1R50512	SUW1R50515	SUW1R51212	SUW1R51215	SUW1R52412	SUW1R52415	SUW1R54812	SUW1R54815	
<b>INPUT</b>	<b>VOLTAGE[V]</b>	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 76		
	<b>CURRENT[A]</b> *2	0.433typ	0.417typ	0.173typ	0.167typ	0.087typ	0.083typ	0.043typ	0.042typ	
	<b>EFFICIENCY[%]</b> *2	72typ	72typ	75typ	75typ	75typ	75typ	75typ	75typ	
<b>OUTPUT</b>	<b>VOLTAGE[V]</b>	±12(+24)	±15(+30)	±12(+24)	±15(+30)	±12(+24)	±15(+30)	±12(+24)	±15(+30)	
	<b>CURRENT[A]</b>	0.065	0.05	0.065	0.05	0.065	0.05	0.065	0.05	
	<b>LINE REGULATION[mV]</b>	60max	75max	60max	75max	60max	75max	60max	75max	
	<b>LOAD REGULATION[mV]</b>	600max	750max	600max	750max	600max	750max	600max	750max	
	<b>RIPPLE[mVp-p]</b>	-20 to +55°C *3	120max	120max	120max	120max	120max	120max	120max	120max
		-40 to -20°C *3	150max	150max	150max	150max	150max	150max	150max	150max
	<b>RIPPLE NOISE[mVp-p]</b>	-20 to +55°C *3	150max	150max	150max	150max	150max	150max	150max	150max
		-40 to -20°C *3	200max	200max	200max	200max	200max	200max	200max	200max
	<b>TEMPERATURE REGULATION[mV]</b>	-20 to +55°C	150max	180max	150max	180max	150max	180max	150max	180max
		-40 to +55°C	240max	290max	240max	290max	240max	290max	240max	290max
<b>DRIFT[mV]</b> *4	50max	60max	50max	60max	50max	60max	50max	60max		
<b>START-UP TIME[ms]</b>	20max (Minimum input, Io=100%)									
<b>OUTPUT VOLTAGE ADJUSTMENT RANGE</b>	Fixed (TRM pin open) ±5% adjustable by external VR									
<b>OUTPUT VOLTAGE SETTING[V] (±5%)</b>	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75		
<b>PROTECTION CIRCUIT AND OTHERS</b>	<b>OVERCURRENT PROTECTION</b>	Works over 105% of rating and recovers automatically								
<b>ISOLATION</b>	<b>INPUT-OUTPUT</b>	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)								
<b>ENVIRONMENT</b>	<b>OPERATING TEMP.,HUMID.AND ALTITUDE</b>	-40 to +85°C, 20 - 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max								
	<b>STORAGE TEMP.,HUMID.AND ALTITUDE</b>	-40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max								
	<b>VIBRATION</b>	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis								
	<b>IMPACT</b>	490.3m/s <sup>2</sup> (50G), 11ms, once each along X, Y and Z axis								
<b>SAFETY</b>	<b>AGENCY APPROVALS</b>	UL60950-1, C-UL, EN60950-1								
<b>OTHERS</b>	<b>CASE SIZE/WEIGHT</b>	21.4×6.5×12.2mm (W×H×D) / 2g max								
	<b>COOLING METHOD</b>	Convection/Forced air								

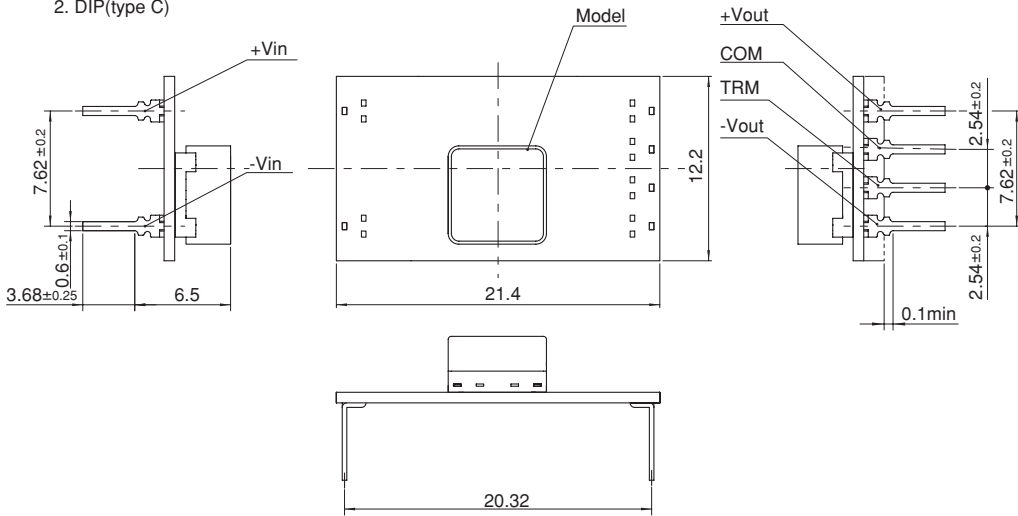
\*1 Output pins can be connected in series to make a 24V/30V output.  
 \*2 Rated input 5V, 12V, 24V or 48V DC Io=100%  
 \*3 Ripple and Ripple Noise is measured by using measuring board with capacitor with in 25mm from output pin terminals.  
 \*4 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.  
 \* Parallel operation with other model is not possible.

External view

1. SMD(type B)



2. DIP(type C)



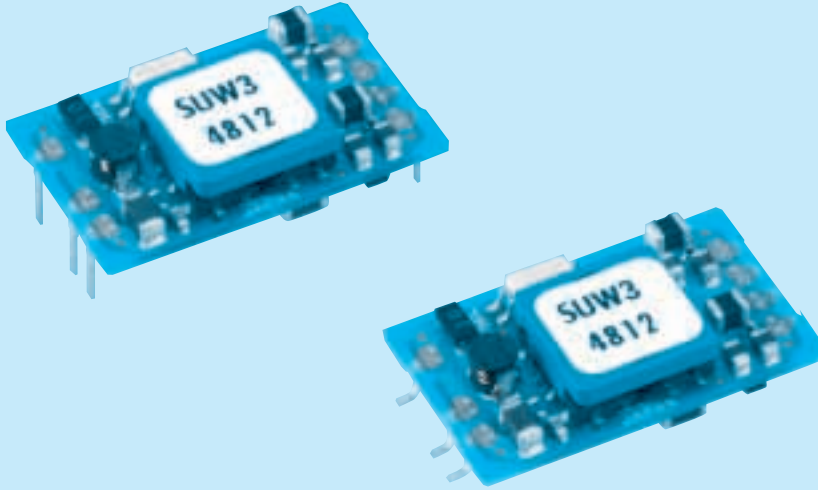
- ※ Tolerance ±0.5
- ※ Dimensions in mm
- ※ Pin terminal thickness : 0.3±0.1
- ※ Pin terminal material : Copper alloy
- ※ Plating treatment of terminal : Lead free plating
- ※ Mass 2g less

# SUW3

SU W 3 12 12 B P - □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

**RoHS**



- ① Series name
- ② Dual output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Mounting type  
B : SMD  
C : DIP
- ⑦ Packing form  
Blank: Plastic cover  
P : Tray (SMD type)
- ⑧ Optional  
G : Capacitor between Input and Output is removed.

MODEL	SUW30512	SUW30515	SUW31212	SUW31215	SUW32412	SUW32415	SUW34812	SUW34815	
MAX OUTPUT WATTAGE[W]	3.12	3	3.12	3	3.12	3	3.12	3	
DC OUTPUT	VOLTAGE[V] *1	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30
	CURRENT[A]	0.13	0.1	0.13	0.1	0.13	0.1	0.13	0.1

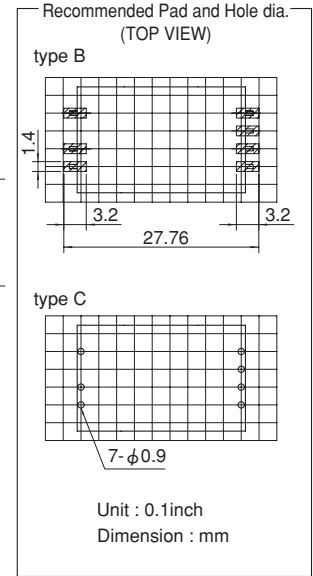
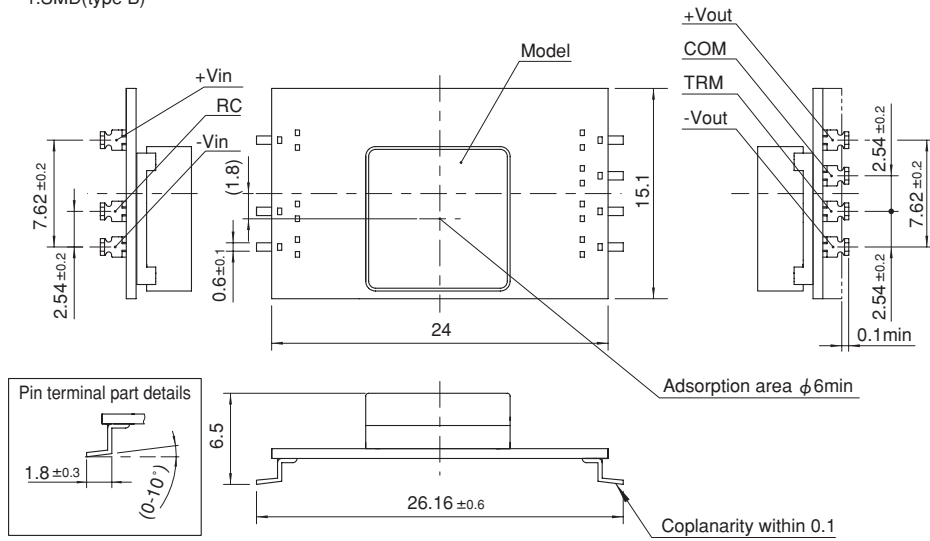
## SPECIFICATIONS

	MODEL	SUW30512	SUW30515	SUW31212	SUW31215	SUW32412	SUW32415	SUW34812	SUW34815	
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 76		
	CURRENT[A] *2	0.822typ	0.790typ	0.334typ	0.321typ	0.167typ	0.161typ	0.084typ	0.081typ	
	EFFICIENCY[%] *2	76typ	76typ	78typ	78typ	78typ	78typ	78typ	78typ	
OUTPUT	VOLTAGE[V]	±12(+24)	±15(+30)	±12(+24)	±15(+30)	±12(+24)	±15(+30)	±12(+24)	±15(+30)	
	CURRENT[A]	0.13	0.1	0.13	0.1	0.13	0.1	0.13	0.1	
	LINE REGULATION[mV]	60max	75max	60max	75max	60max	75max	60max	75max	
	LOAD REGULATION[mV]	600max	750max	600max	750max	600max	750max	600max	750max	
	RIPPLE[mVp-p]	-20 to +55°C *3	120max	120max	120max	120max	120max	120max	120max	120max
		-40 to -20°C *3	150max	150max	150max	150max	150max	150max	150max	150max
	RIPPLE NOISE[mVp-p]	-20 to +55°C *3	150max	150max	150max	150max	150max	150max	150max	150max
		-40 to -20°C *3	200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +55°C	150max	180max	150max	180max	150max	180max	150max	180max
		-40 to +55°C	240max	290max	240max	290max	240max	290max	240max	290max
DRIFT[mV] *4	50max	60max	50max	60max	50max	60max	50max	60max		
START-UP TIME[ms]	20max (Minimum input, Io=100%)									
OUTPUT VOLTAGE ADJUSTMENT RANGE	Fixed (TRM pin open) ±5% adjustable by external VR									
OUTPUT VOLTAGE SETTING[V] (±5%)	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically								
	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)								
ISOLATION	INPUT-OUTPUT	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)								
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 - 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max								
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max								
	VIBRATION	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis								
	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each along X, Y and Z axis								
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1								
OTHERS	CASE SIZE/WEIGHT	24 × 6.5 × 15.1mm (W × H × D) / 3g max								
	COOLING METHOD	Convection/Forced air								

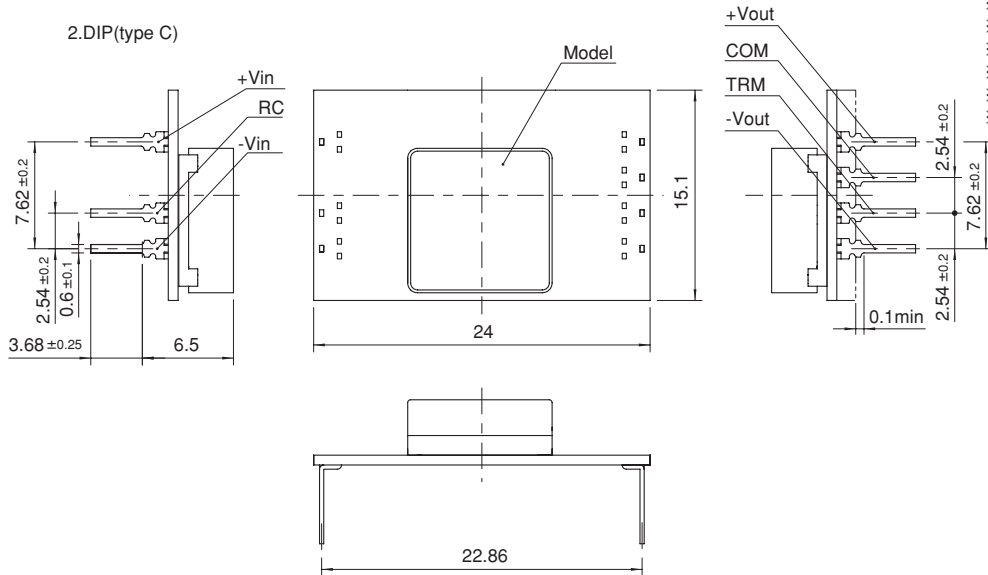
\*1 Output pins can be connected in series to make a 24V/30V output.  
 \*2 Rated input 5V, 12V, 24V or 48V DC Io=100%  
 \*3 Ripple and Ripple Noise is measured by using measuring board with capacitor with in 25mm from output pin terminals.  
 \*4 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.  
 \* Parallel operation with other model is not possible.

External view

1.SMD(type B)



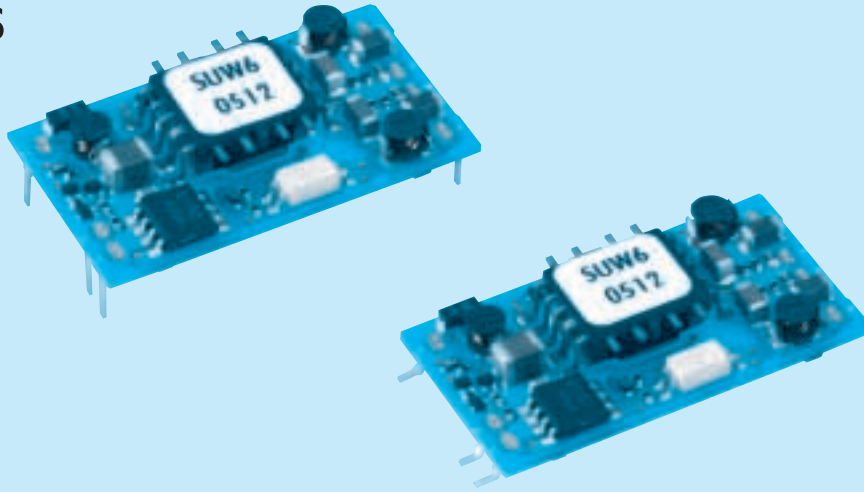
2.DIP(type C)



- ※ Tolerance ±0.5
- ※ Dimensions in mm
- ※ Pin terminal thickness : 0.3±0.1
- ※ Pin terminal material : Copper alloy
- ※ Plating treatment of terminal : Lead free plating
- ※ Mass 3g less

# SUW6

SU W 6 12 12 B P - □  
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧



- ① Series name
- ② Dual output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Mounting type  
B : SMD  
C : DIP
- ⑦ Packing form  
Blank: Plastic cover  
P : Tray (SMD type)
- ⑧ Optional  
G : Capacitor between Input and Output is removed.

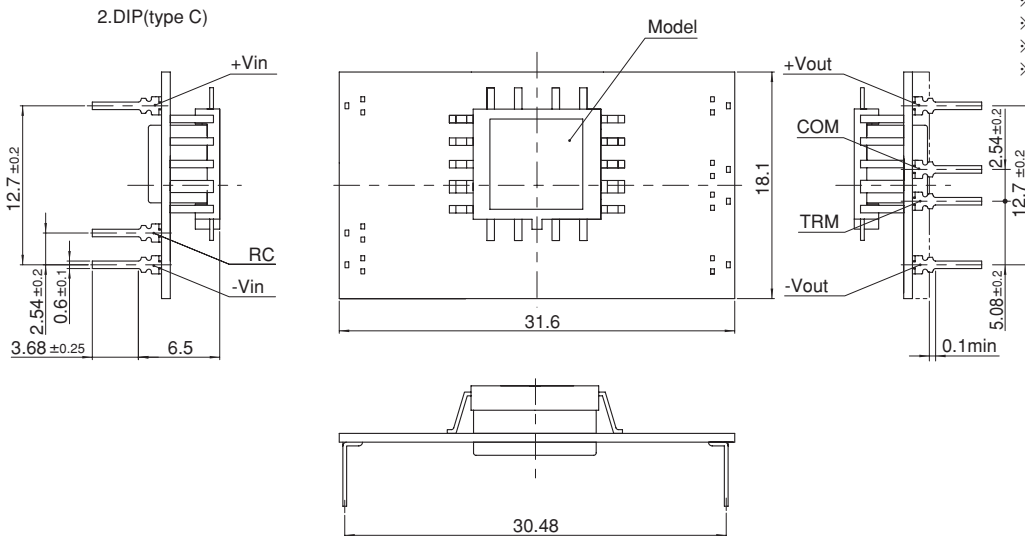
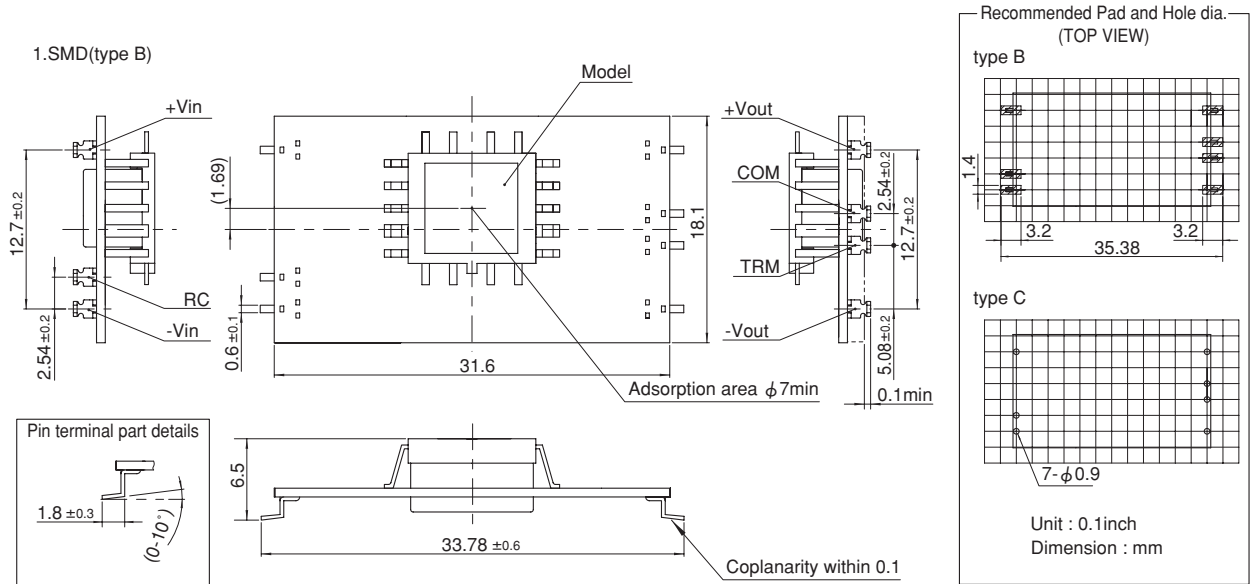
MODEL	SUW60512	SUW60515	SUW61212	SUW61215	SUW62412	SUW62415	SUW64812	SUW64815	
MAX OUTPUT WATTAGE[W]	6	6	6	6	6	6	6	6	
DC OUTPUT	VOLTAGE[V] *1	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30
	CURRENT[A]	0.25	0.2	0.25	0.2	0.25	0.2	0.25	0.2

## SPECIFICATIONS

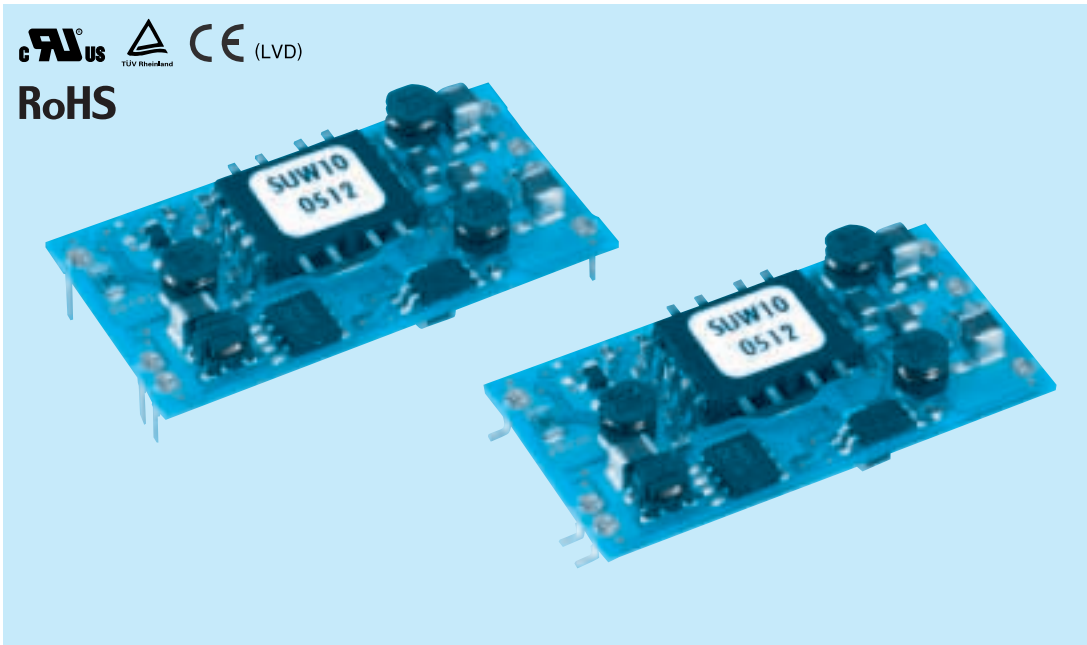
	MODEL	SUW60512	SUW60515	SUW61212	SUW61215	SUW62412	SUW62415	SUW64812	SUW64815	
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 76		
	CURRENT[A] *2	1.538typ	1.538typ	0.588typ	0.588typ	0.291typ	0.291typ	0.145typ	0.145typ	
	EFFICIENCY[%] *2	78typ	78typ	85typ	85typ	86typ	86typ	86typ	86typ	
OUTPUT	VOLTAGE[V]	±12(+24)	±15(+30)	±12(+24)	±15(+30)	±12(+24)	±15(+30)	±12(+24)	±15(+30)	
	CURRENT[A]	0.25	0.2	0.25	0.2	0.25	0.2	0.25	0.2	
	LINE REGULATION[mV]	60max	75max	60max	75max	60max	75max	60max	75max	
	LOAD REGULATION[mV]	600max	750max	600max	750max	600max	750max	600max	750max	
	RIPPLE[mVp-p]	-20 to +55°C *3	120max	120max	120max	120max	120max	120max	120max	120max
		-40 to -20°C *3	150max	150max	150max	150max	150max	150max	150max	150max
	RIPPLE NOISE[mVp-p]	-20 to +55°C *3	150max	150max	150max	150max	150max	150max	150max	150max
		-40 to -20°C *3	200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +55°C	150max	180max	150max	180max	150max	180max	150max	180max
		-40 to +55°C	240max	290max	240max	290max	240max	290max	240max	290max
DRIFT[mV] *4	50max	60max	50max	60max	50max	60max	50max	60max		
START-UP TIME[ms]	20max (Minimum input, Io=100%)									
OUTPUT VOLTAGE ADJUSTMENT RANGE	Fixed (TRM pin open) ±5% adjustable by external VR									
OUTPUT VOLTAGE SETTING[V] (±5%)	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically								
	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)								
ISOLATION	INPUT-OUTPUT	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)								
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 - 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max								
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max								
	VIBRATION	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis								
	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each along X, Y and Z axis								
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1								
OTHERS	CASE SIZE/WEIGHT	31.6×6.5×18.1mm (W×H×D) / 4g max								
	COOLING METHOD	Convection/Forced air								

\*1 Output pins can be connected in series to make a 24V/30V output.  
 \*2 Rated input 5V, 12V, 24V or 48V DC Io=100%  
 \*3 Ripple and Ripple Noise is measured by using measuring board with capacitor with in 25mm from output pin terminals.  
 \*4 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.  
 \* Parallel operation with other model is not possible.

External view



- ※ Tolerance ±0.5
- ※ Dimensions in mm
- ※ Pin terminal thickness : 0.3±0.1
- ※ Pin terminal material : Copper alloy
- ※ Plating treatment of terminal : Lead free plating
- ※ Mass 4g less



- ① Series name
- ② Dual output
- ③ Output wattage
- ④ Input voltage
- ⑤ Output voltage
- ⑥ Mounting type  
B : SMD  
C : DIP
- ⑦ Packing form  
Blank: Plastic cover  
P : Tray(SMD type)
- ⑧ Optional  
G : Capacitor between Input and Output is removed.

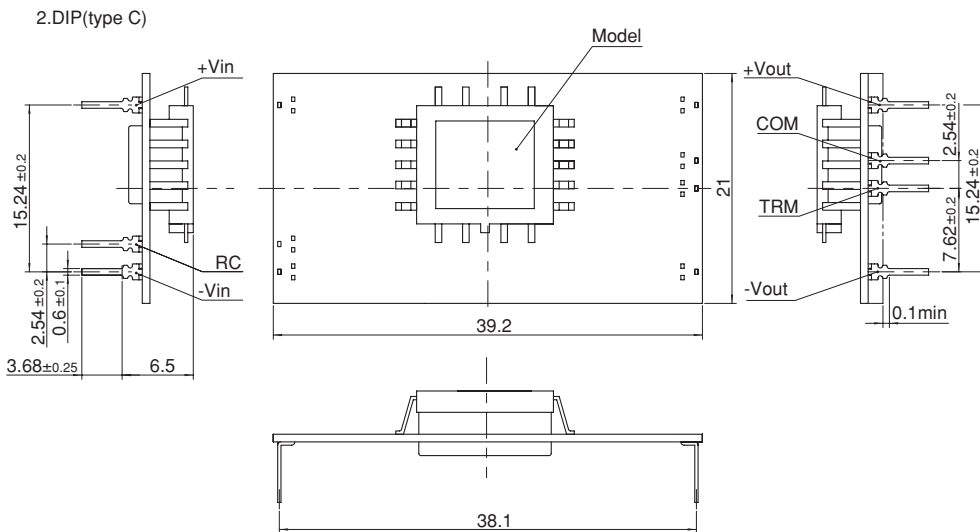
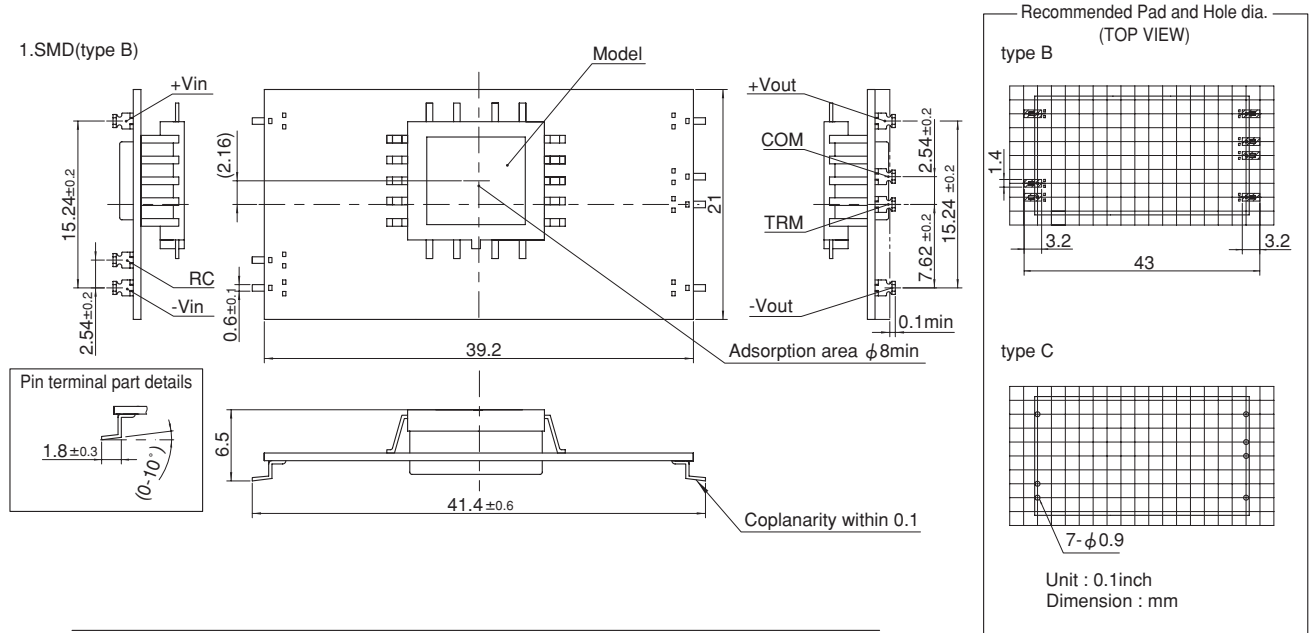
MODEL	SUW100512	SUW100515	SUW101212	SUW101215	SUW102412	SUW102415	SUW104812	SUW104815	
MAX OUTPUT WATTAGE[W]	10.8	10.5	10.8	10.5	10.8	10.5	10.8	10.5	
DC OUTPUT	VOLTAGE[V] *1	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30
	CURRENT[A]	0.45	0.35	0.45	0.35	0.45	0.35	0.45	0.35

## SPECIFICATIONS

	MODEL	SUW100512	SUW100515	SUW101212	SUW101215	SUW102412	SUW102415	SUW104812	SUW104815	
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 76		
	CURRENT[A] *2	2.51typ	2.44typ	1.05typ	1.02typ	0.523typ	0.509typ	0.262typ	0.254typ	
	EFFICIENCY[%] *2	86typ	86typ	86typ	86typ	86typ	86typ	86typ	86typ	
OUTPUT	VOLTAGE[V]	±12(+24)	±15(+30)	±12(+24)	±15(+30)	±12(+24)	±15(+30)	±12(+24)	±15(+30)	
	CURRENT[A]	0.45	0.35	0.45	0.35	0.45	0.35	0.45	0.35	
	LINE REGULATION[mV]	60max	75max	60max	75max	60max	75max	60max	75max	
	LOAD REGULATION[mV]	600max	750max	600max	750max	600max	750max	600max	750max	
	RIPPLE[mVp-p]	-20 to +55°C *3	120max	120max	120max	120max	120max	120max	120max	120max
		-40 to -20°C *3	150max	150max	150max	150max	150max	150max	150max	150max
	RIPPLE NOISE[mVp-p]	-20 to +55°C *3	150max	150max	150max	150max	150max	150max	150max	150max
		-40 to -20°C *3	200max	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +55°C	150max	180max	150max	180max	150max	180max	150max	180max
		-40 to +55°C	240max	290max	240max	290max	240max	290max	240max	290max
DRIFT[mV] *4	50max	60max	50max	60max	50max	60max	50max	60max		
START-UP TIME[ms]	20max (Minimum input, Io=100%)									
OUTPUT VOLTAGE ADJUSTMENT RANGE	Fixed (TRM pin open) ±5% adjustable by external VR									
OUTPUT VOLTAGE SETTING[V] (±5%)	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75	11.40 - 12.60	14.25 - 15.75		
PROTECTION CIRCUIT AND OTHERS	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically								
	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)								
ISOLATION	INPUT-OUTPUT	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)								
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85°C, 20 - 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max								
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100°C, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max								
	VIBRATION	10 - 55Hz, 98.0m/s <sup>2</sup> (10G), 3minutes period, 60minutes each along X, Y and Z axis								
	IMPACT	490.3m/s <sup>2</sup> (50G), 11ms, once each along X, Y and Z axis								
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1								
OTHERS	CASE SIZE/WEIGHT	39.2×6.5×21.0mm (W×H×D) / 6g max								
	COOLING METHOD	Convection/Forced air								

\*1 Output pins can be connected in series to make a 24V/30V output.  
 \*2 Rated input 5V, 12V, 24V or 48V DC Io=100%  
 \*3 Ripple and Ripple Noise is measured by using measuring board with capacitor with in 25mm from output pin terminals.  
 \*4 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25°C.  
 \* Parallel operation with other model is not possible.

External view



- ※ Tolerance  $\pm 0.5$
- ※ Dimensions in mm
- ※ Pin terminal thickness :  $0.3 \pm 0.1$
- ※ Pin terminal material : Copper alloy
- ※ Plating treatment of terminal : Lead free plating
- ※ Mass 6g less