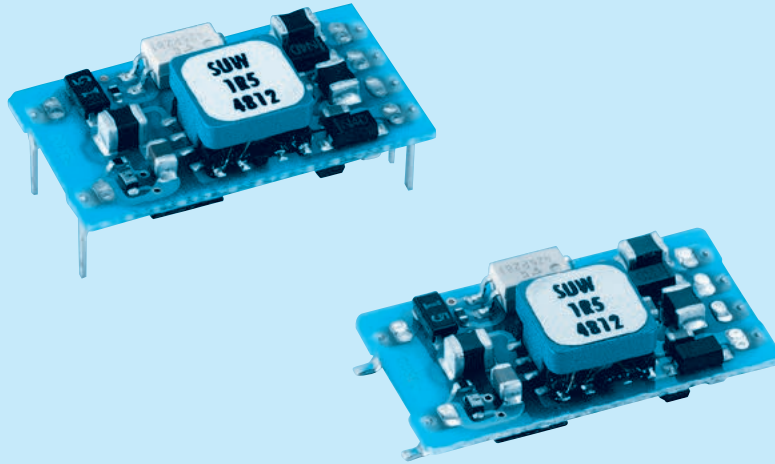




- ① Series name
 ② Dual output
 ③ Output wattage
 ④ Input voltage
 ⑤ Output voltage
 ⑥ Mounting type
 B : SMD
 C : DIP
 ⑦ Packing form
 Blank: Plastic cover
 P : Tray (SMD type)

MODEL	SUW1R50512	SUW1R50515	SUW1R51212	SUW1R51215	SUW1R52412	SUW1R52415	SUW1R54812	SUW1R54815
MAX OUTPUT WATTAGE[W]	1.56	1.5	1.56	1.5	1.56	1.5	1.56	1.5
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
	CURRENT[A]	0.065	0.05	0.065	0.05	0.065	0.05	0.065

SPECIFICATIONS

	MODEL	SUW1R50512	SUW1R50515	SUW1R51212	SUW1R51215	SUW1R52412	SUW1R52415	SUW1R54812	SUW1R54815
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 76	
	CURRENT[A] *2	0.433typ	0.417typ	0.173typ	0.167typ	0.087typ	0.083typ	0.043typ	0.042typ
	EFFICIENCY[%] *2	72typ	72typ	75typ	75typ	75typ	75typ	75typ	75typ
OUTPUT	VOLTAGE[V]	± 12(+24)	± 15(+30)	± 12(+24)	± 15(+30)	± 12(+24)	± 15(+30)	± 12(+24)	± 15(+30)
	CURRENT[A]	0.065	0.05	0.065	0.05	0.065	0.05	0.065	0.05
	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
		-40 to -20°C *3	150max	150max	150max	150max	150max	150max	150max
	RIPPLE NOISE[mVp-p]	-20 to +55°C *3	150max	150max	150max	150max	150max	150max	150max
		-40 to -20°C *3	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +55°C	150max	180max	150max	180max	150max	180max	180max
		-40 to +55°C	240max	290max	240max	290max	240max	290max	290max
PROTECTION CIRCUIT AND OTHERS	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
ISOLATION	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
ENVIRONMENT	INPUT-OUTPUT	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15°C)							
	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 ² (10G), 3minutes period, 60minutes each along X, Y and Z axis							
SAFETY	IMPACT	490.3m/s ² (50G), 11ms, once each along X, Y and Z axis							
	AGENCY APPROVALS	UL60950-1, C-UL, EN60950-1							
OTHERS	CASE SIZE/WEIGHT	21.4 × 6.5 × 12.2mm [0.84 × 0.26 × 0.48 inches] (W × H × D) / 2g 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%

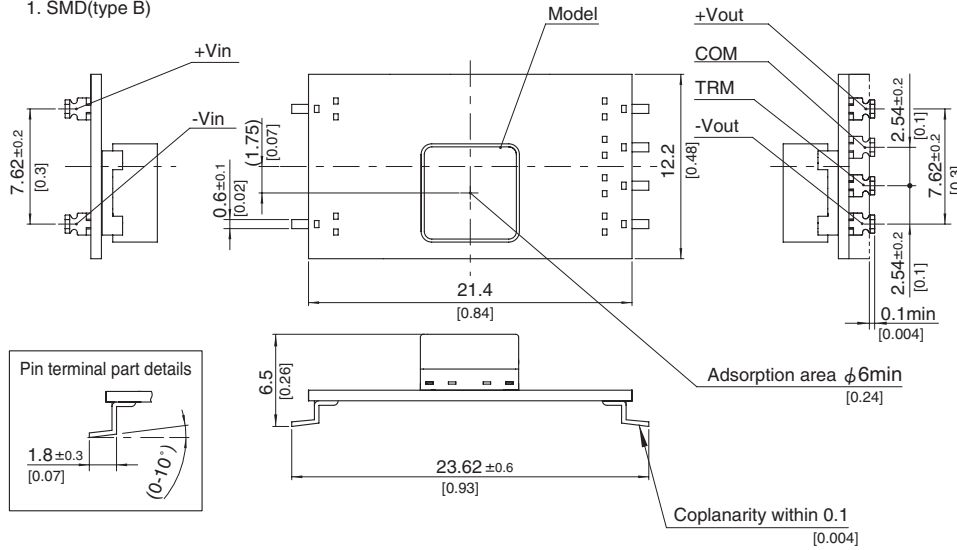
*3 Ripple and Ripple Noise is measured by using measuring board with capacitor with in 25mm from output pin terminals.

*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.

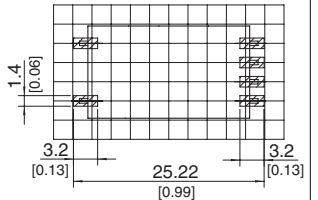
External view

1. SMD(type B)

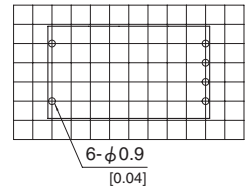


Recommended Pad and Hole dia.
(TOP VIEW)

type B



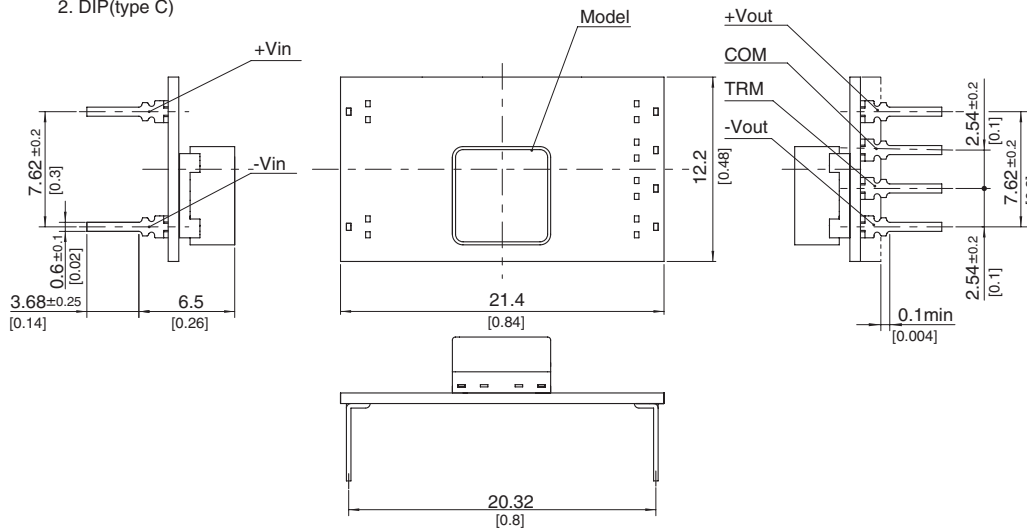
type C



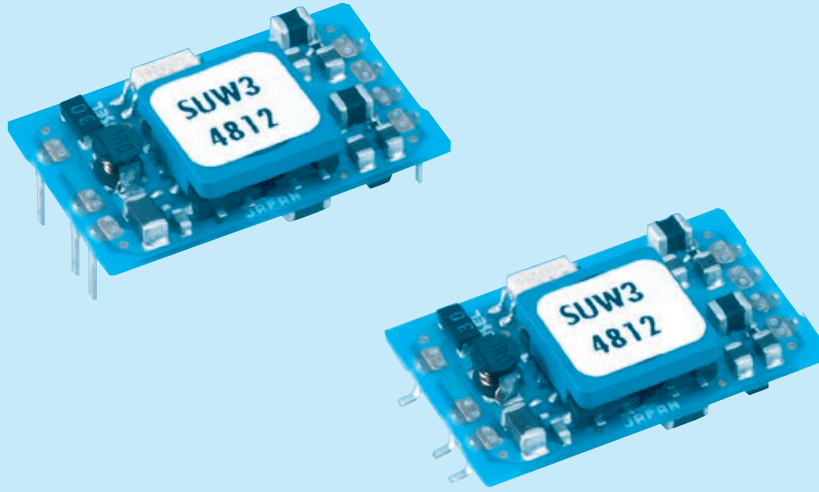
Unit : 0.1inch

Dimensions in mm, []=inches

2. DIP(type C)



- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, []=inches
- ※ Pin terminal thickness : 0.3 ± 0.1 [0.012]
- ※ Pin terminal material : Copper alloy
- ※ Plating treatment of terminal : Lead free plating
- ※ Weight : 2g max



- 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.

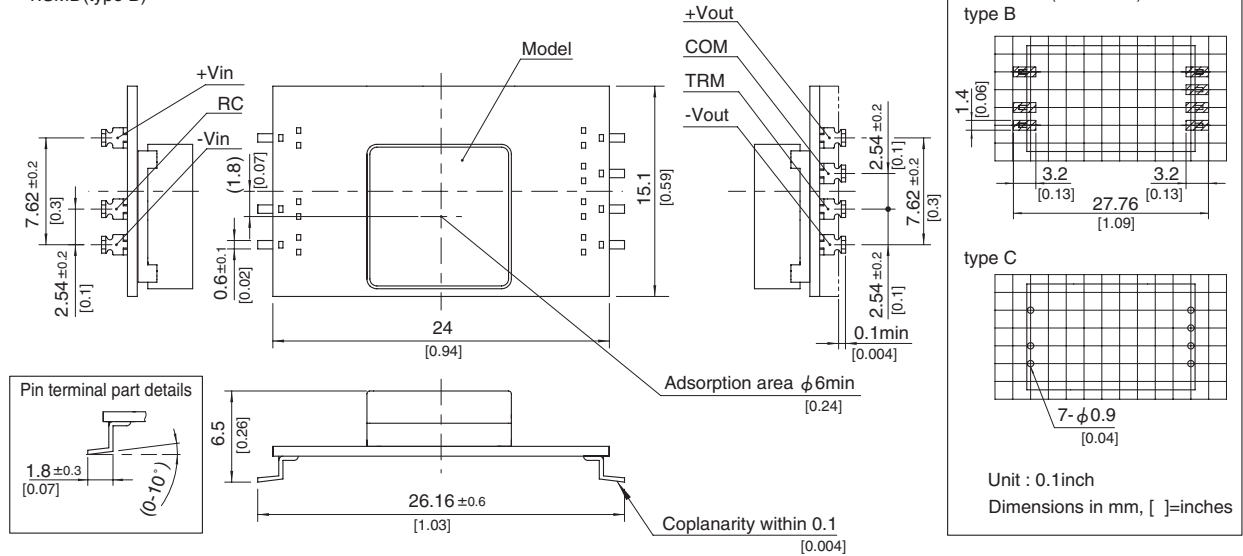
MODEL		SUW30512	SUW30515	SUW31212	SUW31215	SUW32412	SUW32415	SUW34812	SUW34815
MAX OUTPUT WATTAGE[W]		3.12	3	3.12	3	3.12	3	3.12	3
DC OUTPUT	VOLTAGE[V] *1	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30	±12 or +24	±15 or +30
	CURRENT[A]	0.13	0.1	0.13	0.1	0.13	0.1	0.13	0.1

SPECIFICATIONS

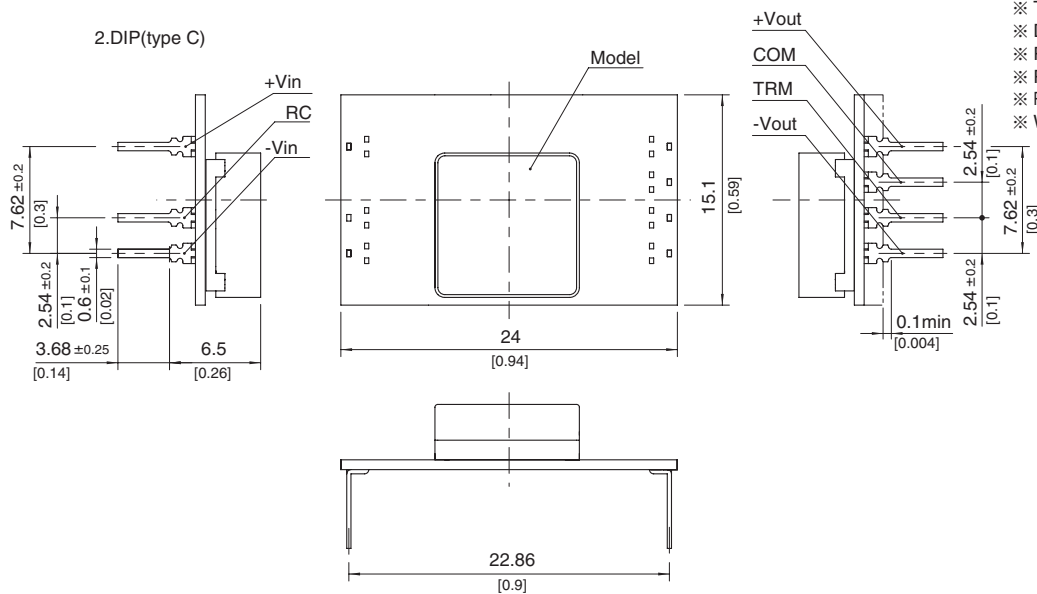
	MODEL	SUW30512	SUW30515	SUW31212	SUW31215	SUW32412	SUW32415	SUW34812	SUW34815
INPUT	VOLTAGE[V]	DC4.5 - 9		DC9 - 18		DC18 - 36		DC36 - 76	
	CURRENT[A] *2	0.822typ	0.790typ	0.334typ	0.321typ	0.167typ	0.161typ	0.084typ	0.081typ
	EFFICIENCY[%] *2	76typ	76typ	78typ	78typ	78typ	78typ	78typ	78typ
OUTPUT	VOLTAGE[V]	±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
		-40 to -20°C *3	150max	150max	150max	150max	150max	150max	150max
	RIPPLE NOISE[mVp-p]	-20 to +55°C *3	150max	150max	150max	150max	150max	150max	150max
		-40 to -20°C *3	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +55°C	150max	180max	150max	180max	150max	180max	180max
		-40 to +55°C	240max	290max	240max	290max	240max	290max	290max
PROTECTION CIRCUIT AND OTHERS	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
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
ISOLATION	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)							
	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 ² (10G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT	490.3m/s ² (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 [0.94 × 0.26 × 0.59 inches] (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.

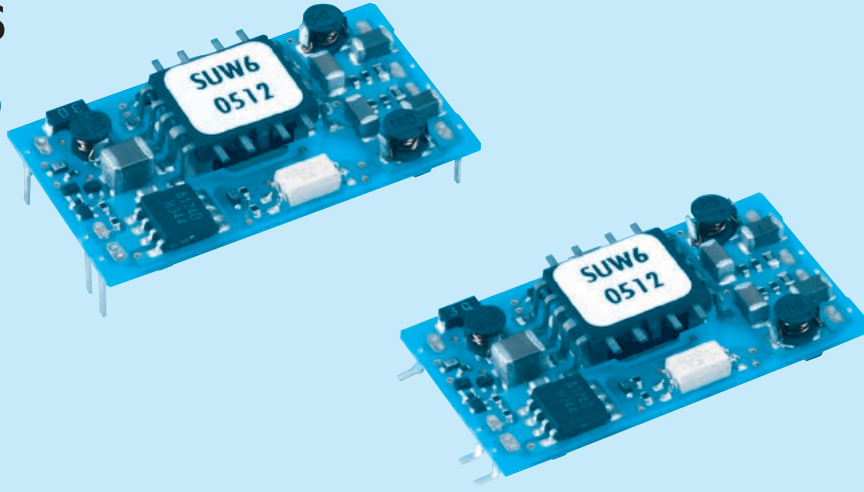
1.SMD(type B)



2.DIP(type C)



- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, [] = inches
- ※ Pin terminal thickness : 0.3 ± 0.1 [0.012]
- ※ Pin terminal material : Copper alloy
- ※ Plating treatment of terminal : Lead free plating
- ※ Weight : 3g max



- 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

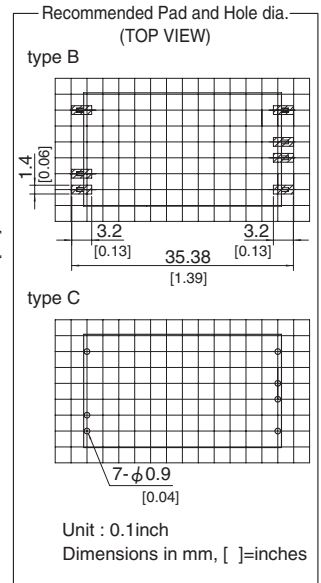
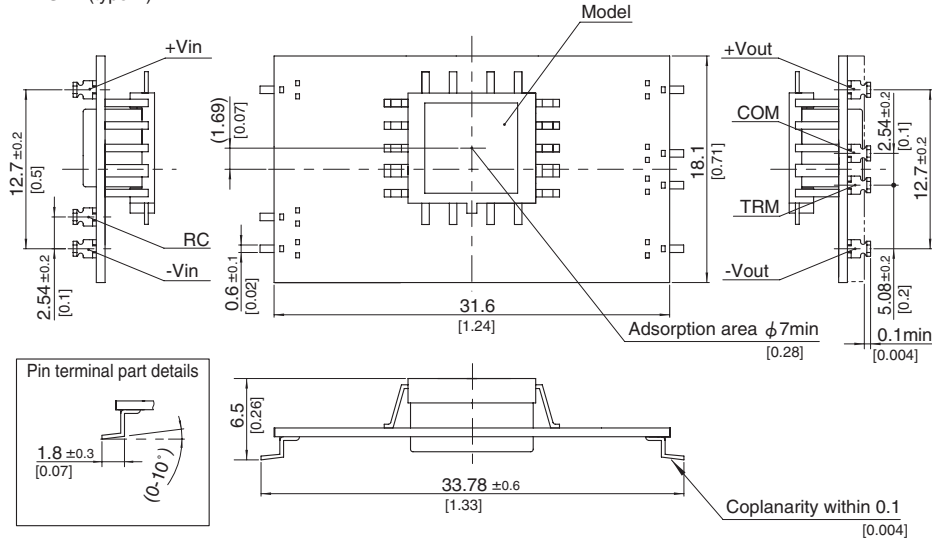
SPECIFICATIONS

	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℃ *3	120max	120max	120max	120max	120max	120max	120max
		-40 to -20℃ *3	150max	150max	150max	150max	150max	150max	150max
	RIPPLE NOISE[mVp-p]	-20 to +55℃ *3	150max	150max	150max	150max	150max	150max	150max
		-40 to -20℃ *3	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +55℃	150max	180max	150max	180max	150max	180max	180max
		-40 to +55℃	240max	290max	240max	290max	240max	290max	290max
PROTECTION CIRCUIT AND OTHERS	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
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
ISOLATION	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)							
	INPUT-OUTPUT	AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃)							
ENVIRONMENT	OPERATING TEMP., HUMID. AND ALTITUDE	-40 to +85℃, 20 - 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max							
	STORAGE TEMP., HUMID. AND ALTITUDE	-40 to +100℃, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max							
	VIBRATION	10 - 55Hz, 98.0m/s ² (10G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT	490.3m/s ² (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 [1.24×0.26×0.71 inches] (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℃.
 * Parallel operation with other model is not possible.

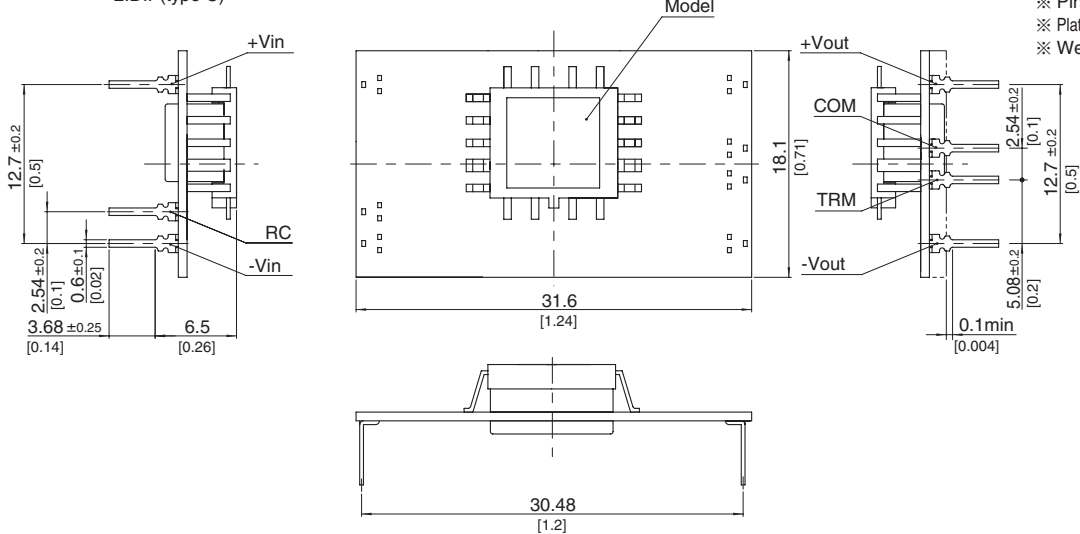
External view

1.SMD(type B)



- ※ Tolerance ±0.5 [±0.02]
- ※ Dimensions in mm, []=inches
- ※ Pin terminal thickness : 0.3±0.1 [0.012]
- ※ Pin terminal material : Copper alloy
- ※ Plating treatment of terminal : Lead free plating
- ※ Weight : 4g max

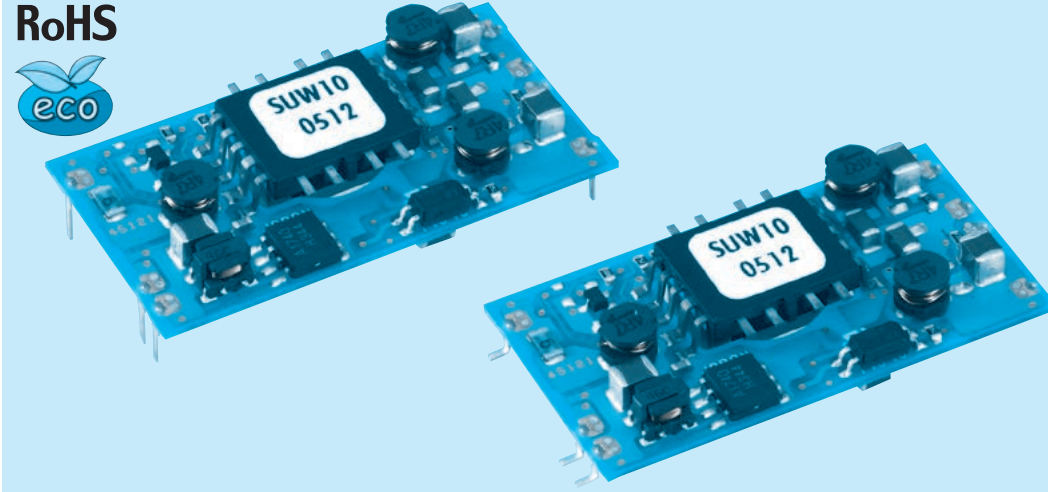
2.DIP(type C)



SUW10

SU W 10 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	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
	CURRENT[A]	0.45	0.35	0.45	0.35	0.45	0.35	0.45

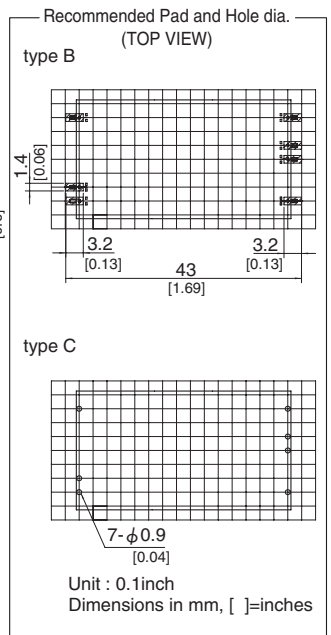
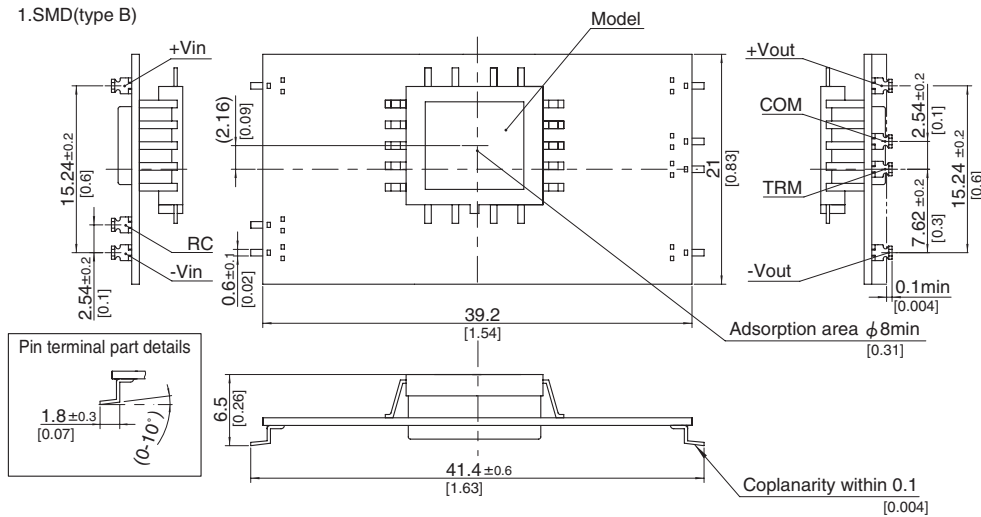
SPECIFICATIONS

	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
		-40 to -20°C *3	150max	150max	150max	150max	150max	150max	150max
	RIPPLE NOISE[mVp-p]	-20 to +55°C *3	150max	150max	150max	150max	150max	150max	150max
		-40 to -20°C *3	200max	200max	200max	200max	200max	200max	200max
	TEMPERATURE REGULATION[mV]	-20 to +55°C	150max	180max	150max	180max	150max	180max	180max
		-40 to +55°C	240max	290max	240max	290max	240max	290max	290max
PROTECTION CIRCUIT AND OTHERS	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
	OVERCURRENT PROTECTION	Works over 105% of rating and recovers automatically							
ISOLATION	REMOTE ON/OFF	Provided (Negative logic L : ON, H : OFF)							
	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 ² (10G), 3minutes period, 60minutes each along X, Y and Z axis							
	IMPACT	490.3m/s ² (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 [1.54 × 0.26 × 0.83 inches] (W × H × D) / 6g max							
	COOLING METHOD	Convection/Forced air							

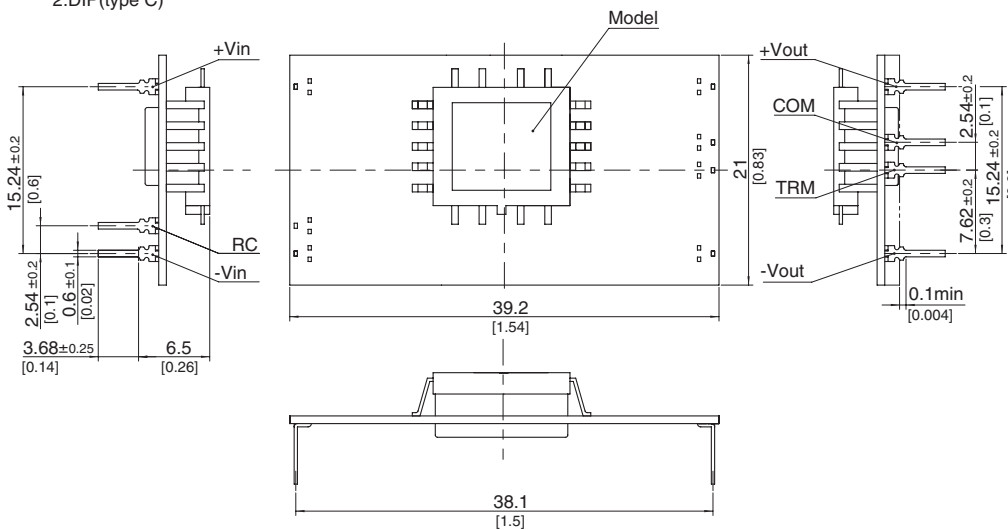
- *1 Output pins can be connected in series to make a 24V/30V output.
- *2 Rated input 5V, 12V, 24V or 48V DC Io=100%
- *3 Ripple and Ripple Noise is measured by using measuring board with capacitor with in 25mm from output pin terminals.
- *4 Drift is the change in DC output for an eight hour period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

External view

1.SMD(type B)



2.DIP(type C)



- ※ Tolerance ± 0.5 [± 0.02]
- ※ Dimensions in mm, []=inches
- ※ Pin terminal thickness : 0.3 ± 0.1 [0.012]
- ※ Pin terminal material : Copper alloy
- ※ Plating treatment of terminal : Lead free plating
- ※ Weight : 6g max



Макро Групп – это:

- дистрибьютор электронных компонентов с 1994 года
- контрактный производитель электроники с 2007 года с собственным производством в Санкт-Петербурге (компания Макро ЕМС, входит в ГК Макро Групп)
- поставщик полупроводниковых материалов
- комплексный поставщик электронных компонентов
- моделирование и производство полупроводниковых эпитаксиальных гетероструктур для задач оптоэлектроники

Головной офис расположен в Санкт-Петербурге. Собственные представительства в крупных промышленных городах России и стран СНГ.

Преимущества для наших заказчиков:

- работа по тендерам с 2012 года
- оформление банковских гарантий
- отсрочки платежей
- поставка электронных компонентов по проектным ценам
- инженерная поддержка проектов заказчиков
- сертификат системы менеджмента качества ISO 9001-2015
- необходимые сертификаты и лицензии

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