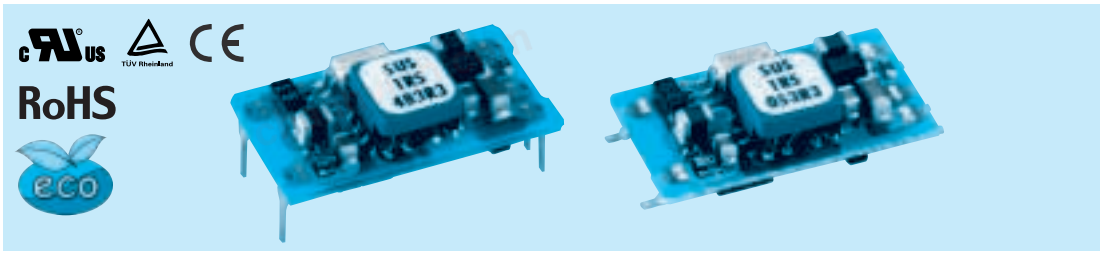
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COSEL DC-DC Converters PCB Mount type

# SUS1R5

## Ordering information

| SU | S | 1R5 | 12 | 05 | B | P |
|---|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ |



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

| MODEL | | SUS1R5053R3 | SUS1R50505 | SUS1R50512 | SUS1R50515 | SUS1R5123R3 | SUS1R51205 | SUS1R51212 | SUS1R51215 |
|---|---|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 1.32 | 1.5 | 1.56 | 1.5 | 1.32 | 1.5 | 1.56 | 1.5 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 0.4 | 0.3 | 0.13 | 0.1 | 0.4 | 0.3 | 0.13 | 0.1 |

## SPECIFICATIONS

| | MODEL | | SUS1R5053R3 | SUS1R50505 | SUS1R50512 | SUS1R50515 | SUS1R5123R3 | SUS1R51205 | SUS1R51212 | SUS1R51215 |
|---|---|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC4.5 - 9 | | | | DC9 - 18 | | | |
| | CURRENT[A] | *2 | 0.377typ | 0.405typ | 0.422typ | 0.405typ | 0.153typ | 0.164typ | 0.171typ | 0.164typ |
| | EFFICIENCY[%] | *2 | 70typ | 74typ | 74typ | 74typ | 72typ | 76typ | 76typ | 76typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 0.4 | 0.3 | 0.13 | 0.1 | 0.4 | 0.3 | 0.13 | 0.1 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 40max | 40max | 100max | 120max | 40max | 40max | 100max | 120max |
| | RIPPLE[mVp-p] | -20 to +55℃ *3 | 80max | 80max | 120max | 120max | 80max | 80max | 120max | 120max |
| | | -40 to -20℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | RIPPLE NOISE[mVp-p] | -20 to +55℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | | -40 to -20℃ *3 | 200max | 200max | 200max | 200max | 200max | 200max | 200max | 200max |
| | TEMPERATURE REGULATION[mV] | -20 to +55℃ | 50max | 50max | 150max | 180max | 50max | 50max | 150max | 180max |
| | | -40 to +55℃ | 80max | 80max | 240max | 290max | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 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] (±3%) | | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | | | |

| MODEL | | SUS1R5243R3 | SUS1R52405 | SUS1R52412 | SUS1R52415 | SUS1R5483R3 | SUS1R54805 | SUS1R54812 | SUS1R54815 |
|---|---|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 1.32 | 1.5 | 1.56 | 1.5 | 1.32 | 1.5 | 1.56 | 1.5 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 0.4 | 0.3 | 0.13 | 0.1 | 0.4 | 0.3 | 0.13 | 0.1 |

## SPECIFICATIONS

| | MODEL | | SUS1R5243R3 | SUS1R52405 | SUS1R52412 | SUS1R52415 | SUS1R5483R3 | SUS1R54805 | SUS1R54812 | SUS1R54815 |
|---|---|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC18 - 36 | | | | DC36 - 76 | | | |
| | CURRENT[A] | *2 | 0.076typ | 0.082typ | 0.084typ | 0.081typ | 0.038typ | 0.041typ | 0.042typ | 0.041typ |
| | EFFICIENCY[%] | *2 | 72typ | 76typ | 77typ | 77typ | 72typ | 76typ | 77typ | 77typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 0.4 | 0.3 | 0.13 | 0.1 | 0.4 | 0.3 | 0.13 | 0.1 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 40max | 40max | 100max | 120max | 40max | 40max | 100max | 120max |
| | RIPPLE[mVp-p] | -20 to +55℃ *3 | 80max | 80max | 120max | 120max | 80max | 80max | 120max | 120max |
| | | -40 to -20℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | RIPPLE NOISE[mVp-p] | -20 to +55℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | | -40 to -20℃ *3 | 200max | 200max | 200max | 200max | 200max | 200max | 200max | 200max |
| | TEMPERATURE REGULATION[mV] | -20 to +55℃ | 50max | 50max | 150max | 180max | 50max | 50max | 150max | 180max |
| | | -40 to +55℃ | 80max | 80max | 240max | 290max | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 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] (±3%) | | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | | | |

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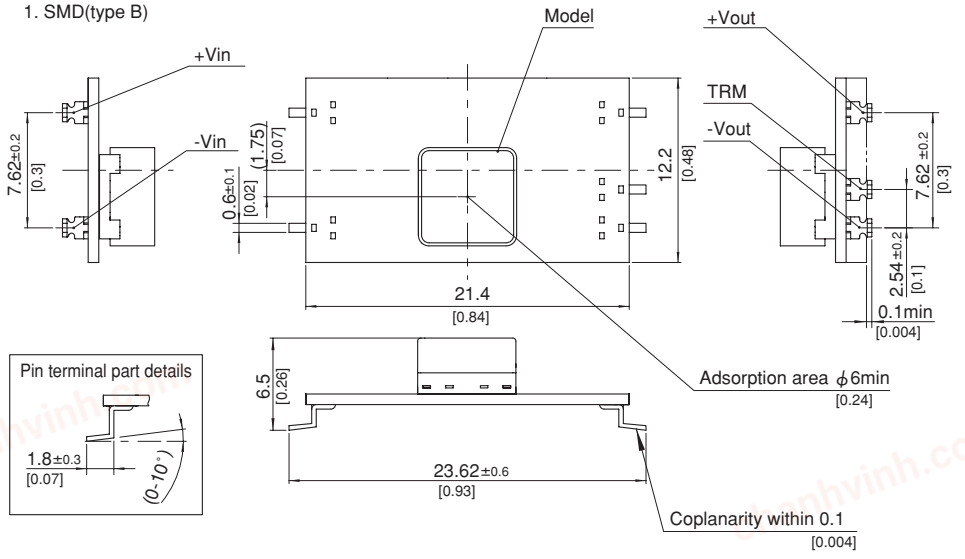
## GENERAL SPECIFICATIONS

| | | |
|---|---|---|
| ISOLATION | 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/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis |
| | IMPACT | 490.3m/s² (50G), 11ms, once each along X, Y and Z axis |
| SAFETY | 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 |

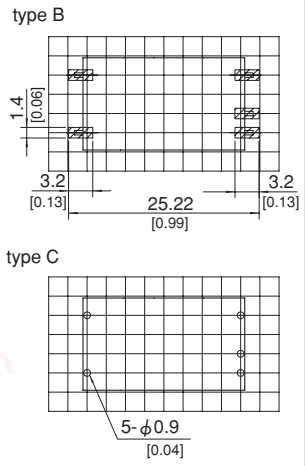
*1 SUW1R5xx12/SUW1R5xx15 is available as single output, +24V/+30V.
*2 Rated input 5V, 12V, 24V or 48V DC Io=100%
*3 Ripple and Ripple Noise is measured by using measuring board with capacitor with in 25mm from output pin terminals.
*4 Drift is the change in DC output for an eight hour period after a half-hour warm-up at 25℃.
* Parallel operation with other model is not possible.

## External view

1. SMD(type B)

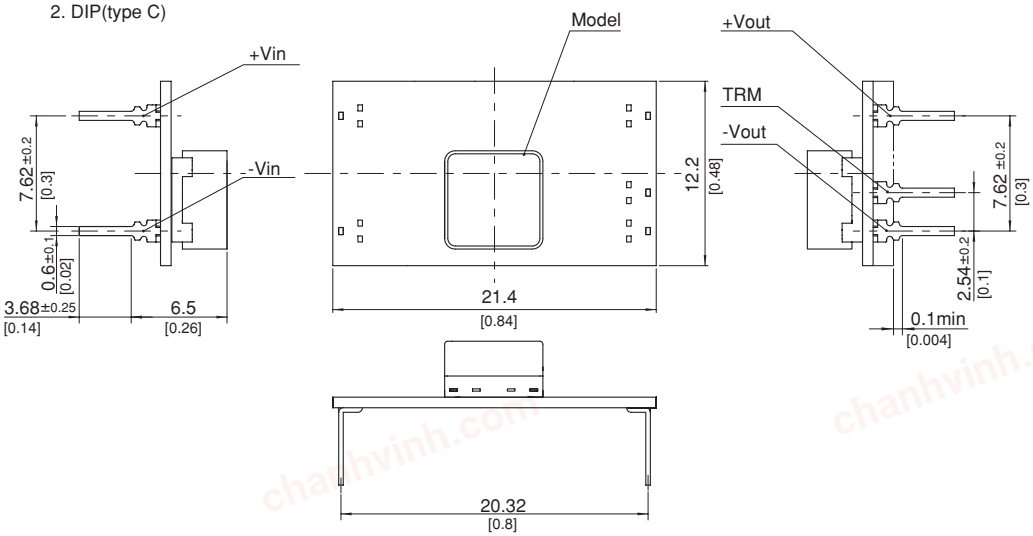



Recommended Pad and Hole dia.
(TOP VIEW)




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

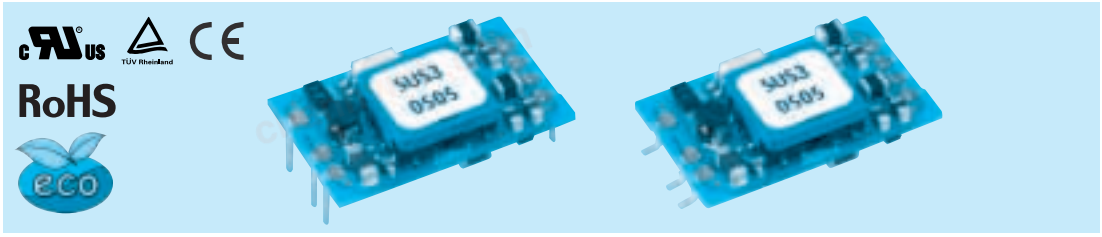
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COSEL DC-DC Converters PCB Mount type

# SUS3

## Ordering information

| SU | S | 3 | 12 | 05 | B | P | -□ |
|---|---|---|---|---|---|---|---|
| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ |



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

| MODEL | | SUS3053R3 | SUS30505 | SUS30512 | SUS30515 | SUS3123R3 | SUS31205 | SUS31212 | SUS31215 |
|---|---|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 1.98 | 3 | 3 | 3 | 1.98 | 3 | 3 | 3 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 0.6 | 0.6 | 0.25 | 0.2 | 0.6 | 0.6 | 0.25 | 0.2 |

## SPECIFICATIONS

| | MODEL | | SUS3053R3 | SUS30505 | SUS30512 | SUS30515 | SUS3123R3 | SUS31205 | SUS31212 | SUS31215 |
|---|---|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC4.5 - 9 | | | | DC9 - 18 | | | |
| | CURRENT[A] | *2 | 0.536typ | 0.780typ | 0.760typ | 0.760typ | 0.218typ | 0.317typ | 0.309typ | 0.313typ |
| | EFFICIENCY[%] | *2 | 74typ | 77typ | 79typ | 79typ | 76typ | 79typ | 81typ | 80typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 0.6 | 0.6 | 0.25 | 0.2 | 0.6 | 0.6 | 0.25 | 0.2 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 40max | 40max | 100max | 120max | 40max | 40max | 100max | 120max |
| | RIPPLE[mVp-p] | -20 to +55℃ *3 | 80max | 80max | 120max | 120max | 80max | 80max | 120max | 120max |
| | | -40 to -20℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | RIPPLE NOISE[mVp-p] | -20 to +55℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | | -40 to -20℃ *3 | 200max | 200max | 200max | 200max | 200max | 200max | 200max | 200max |
| | TEMPERATURE REGULATION[mV] | -20 to +55℃ | 50max | 50max | 150max | 180max | 50max | 50max | 150max | 180max |
| | | -40 to +55℃ | 80max | 80max | 240max | 290max | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 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] (±3%) | | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L : ON, H : OFF) | | | | | | | |

| MODEL | | SUS3243R3 | SUS32405 | SUS32412 | SUS32415 | SUS3483R3 | SUS34805 | SUS34812 | SUS34815 |
|---|---|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 1.98 | 3 | 3 | 3 | 1.98 | 3 | 3 | 3 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 0.6 | 0.6 | 0.25 | 0.2 | 0.6 | 0.6 | 0.25 | 0.2 |

## SPECIFICATIONS

| | MODEL | | SUS3243R3 | SUS32405 | SUS32412 | SUS32415 | SUS3483R3 | SUS34805 | SUS34812 | SUS34815 |
|---|---|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC18 - 36 | | | | DC36 - 76 | | | |
| | CURRENT[A] | *2 | 0.110typ | 0.159typ | 0.155typ | 0.157typ | 0.056typ | 0.080typ | 0.078typ | 0.078typ |
| | EFFICIENCY[%] | *2 | 75typ | 79typ | 81typ | 80typ | 74typ | 79typ | 81typ | 81typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 0.6 | 0.6 | 0.25 | 0.2 | 0.6 | 0.6 | 0.25 | 0.2 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 40max | 40max | 100max | 120max | 40max | 40max | 100max | 120max |
| | RIPPLE[mVp-p] | -20 to +55℃ *3 | 80max | 80max | 120max | 120max | 80max | 80max | 120max | 120max |
| | | -40 to -20℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | RIPPLE NOISE[mVp-p] | -20 to +55℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | | -40 to -20℃ *3 | 200max | 200max | 200max | 200max | 200max | 200max | 200max | 200max |
| | TEMPERATURE REGULATION[mV] | -20 to +55℃ | 50max | 50max | 150max | 180max | 50max | 50max | 150max | 180max |
| | | -40 to +55℃ | 80max | 80max | 240max | 290max | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 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] (±3%) | | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L : ON, H : OFF) | | | | | | | |

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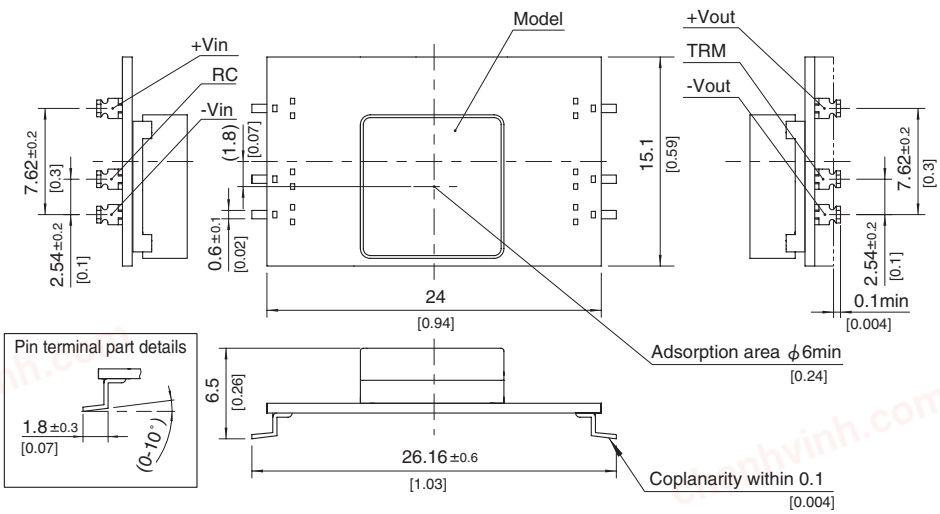
## GENERAL SPECIFICATIONS

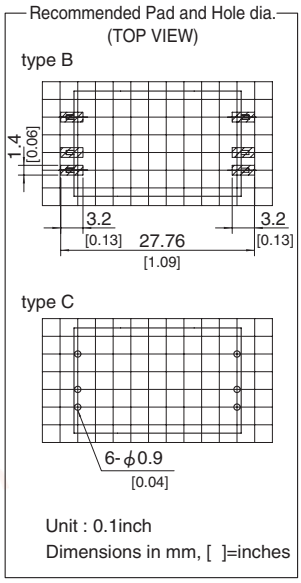
| | | |
|---|---|---|
| ISOLATION | INPUT-OUTPUT | AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | -40 to +85℃, 20 - 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | -40 to +100℃, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max |
| | VIBRATION | 10 - 55Hz, 98.0m/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis |
| | IMPACT | 490.3m/s² (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 SUW3xx12/SUW3xx15 is available as single output, +24V/+30V.
*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

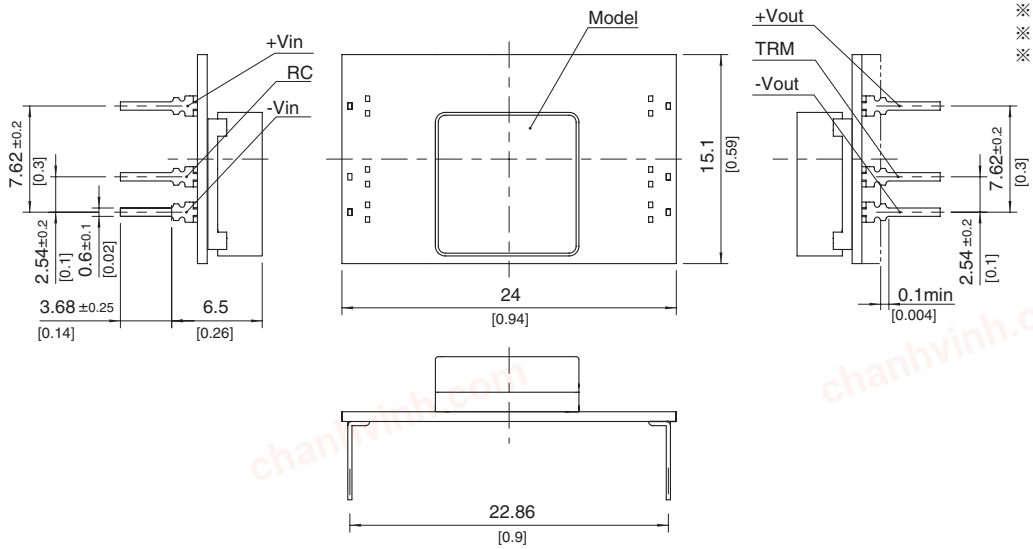
1.SMD(type B)




※ 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 : 3g max

2.DIP(type C)



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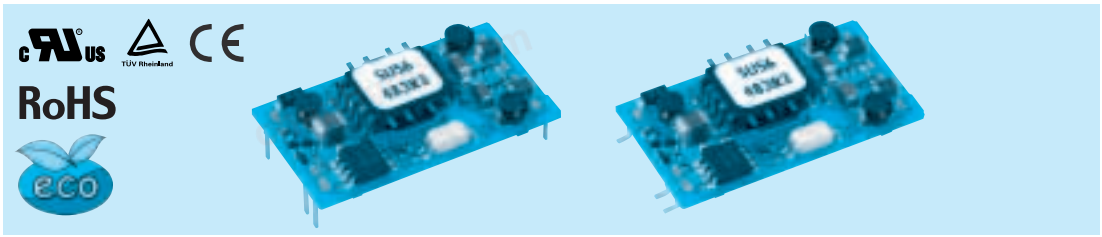
COSEL DC-DC Converters PCB Mount type

# SUS6

## Ordering information

SU S 6 12 05 B P -□

① ② ③ ④ ⑤ ⑥ ⑦ ⑧



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

| MODEL | | SUS6053R3 | SUS60505 | SUS60512 | SUS60515 | SUS6123R3 | SUS61205 | SUS61212 | SUS61215 |
|---|---|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 3.96 | 5 | 6 | 6 | 4.46 | 6 | 6 | 6 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 1.2 | 1 | 0.5 | 0.4 | 1.35 | 1.2 | 0.5 | 0.4 |

## SPECIFICATIONS

| | MODEL | | SUS6053R3 | SUS60505 | SUS60512 | SUS60515 | SUS6123R3 | SUS61205 | SUS61212 | SUS61215 |
|---|---|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC4.5 - 9 | | | | DC9 - 18 | | | |
| | CURRENT[A] | *2 | 1.100typ | 1.316typ | 1.500typ | 1.500typ | 0.502typ | 0.617typ | 0.588typ | 0.588typ |
| | EFFICIENCY[%] | *2 | 72typ | 76typ | 80typ | 80typ | 74typ | 81typ | 85typ | 85typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 1.2 | 1 | 0.5 | 0.4 | 1.35 | 1.2 | 0.5 | 0.4 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 40max | 40max | 100max | 120max | 40max | 40max | 100max | 120max |
| | RIPPLE[mVp-p] | -20 to +55℃ *3 | 80max | 80max | 120max | 120max | 80max | 80max | 120max | 120max |
| | | -40 to -20℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | RIPPLE NOISE[mVp-p] | -20 to +55℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | | -40 to -20℃ *3 | 200max | 200max | 200max | 200max | 200max | 200max | 200max | 200max |
| | TEMPERATURE REGULATION[mV] | -20 to +55℃ | 50max | 50max | 150max | 180max | 50max | 50max | 150max | 180max |
| | | -40 to +55℃ | 80max | 80max | 240max | 290max | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 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] (±3%) | | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L : ON, H : OFF) | | | | | | | |

| MODEL | | SUS6243R3 | SUS62405 | SUS62412 | SUS62415 | SUS6483R3 | SUS64805 | SUS64812 | SUS64815 |
|---|---|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 4.46 | 6 | 6 | 6 | 4.46 | 6 | 6 | 6 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 1.35 | 1.2 | 0.5 | 0.4 | 1.35 | 1.2 | 0.5 | 0.4 |

## SPECIFICATIONS

| | MODEL | | SUS6243R3 | SUS62405 | SUS62412 | SUS62415 | SUS6483R3 | SUS64805 | SUS64812 | SUS64815 |
|---|---|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC18 - 36 | | | | DC36 - 76 | | | |
| | CURRENT[A] | *2 | 0.248typ | 0.309typ | 0.291typ | 0.291typ | 0.121typ | 0.154typ | 0.145typ | 0.145typ |
| | EFFICIENCY[%] | *2 | 75typ | 81typ | 86typ | 86typ | 77typ | 81typ | 86typ | 86typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 1.35 | 1.2 | 0.5 | 0.4 | 1.35 | 1.2 | 0.5 | 0.4 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 40max | 40max | 100max | 120max | 40max | 40max | 100max | 120max |
| | RIPPLE[mVp-p] | -20 to +55℃ *3 | 80max | 80max | 120max | 120max | 80max | 80max | 120max | 120max |
| | | -40 to -20℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | RIPPLE NOISE[mVp-p] | -20 to +55℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | | -40 to -20℃ *3 | 200max | 200max | 200max | 200max | 200max | 200max | 200max | 200max |
| | TEMPERATURE REGULATION[mV] | -20 to +55℃ | 50max | 50max | 150max | 180max | 50max | 50max | 150max | 180max |
| | | -40 to +55℃ | 80max | 80max | 240max | 290max | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 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] (±3%) | | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L : ON, H : OFF) | | | | | | | |

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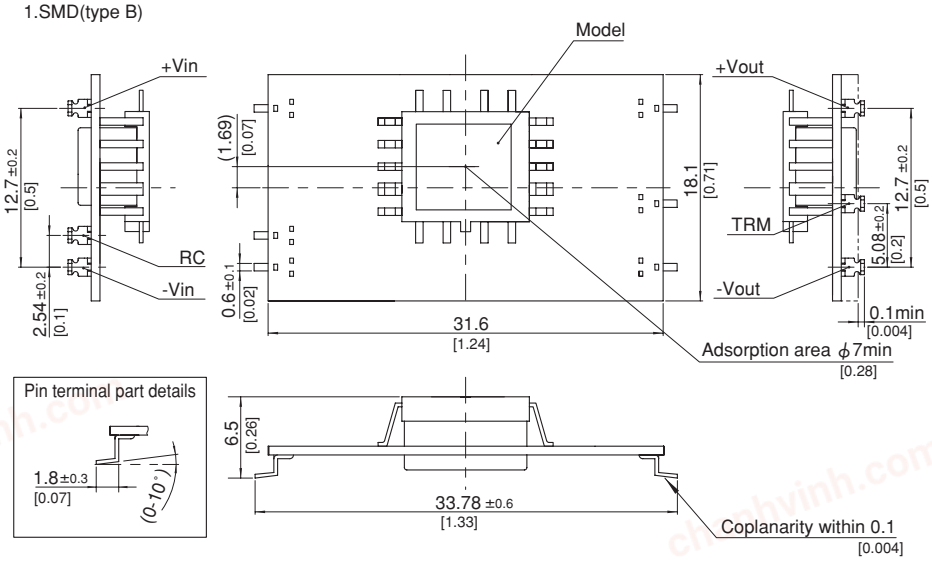
## GENERAL SPECIFICATIONS

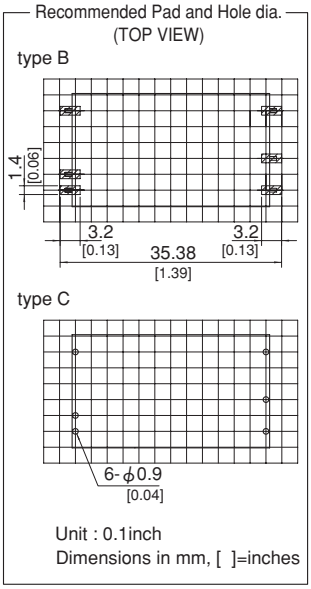
| | | |
|---|---|---|
| ISOLATION | INPUT-OUTPUT | AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | -40 to +85℃, 20 - 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | -40 to +100℃, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max |
| | VIBRATION | 10 - 55Hz, 98.0m/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis |
| | IMPACT | 490.3m/s² (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 SUW6xx12/SUW6xx15 is available as single output, +24V/+30V.
*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

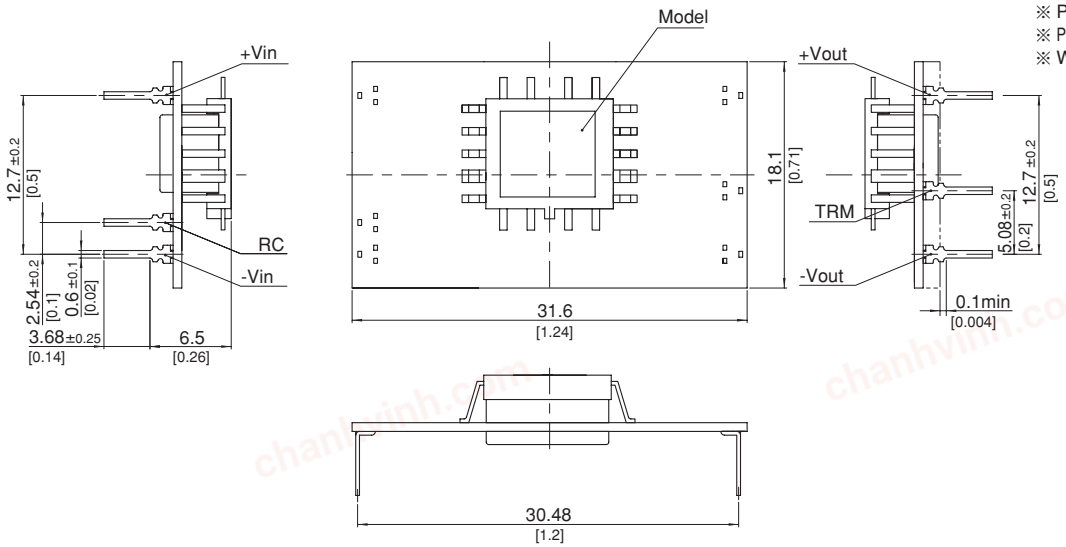
1.SMD(type B)




※ 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)



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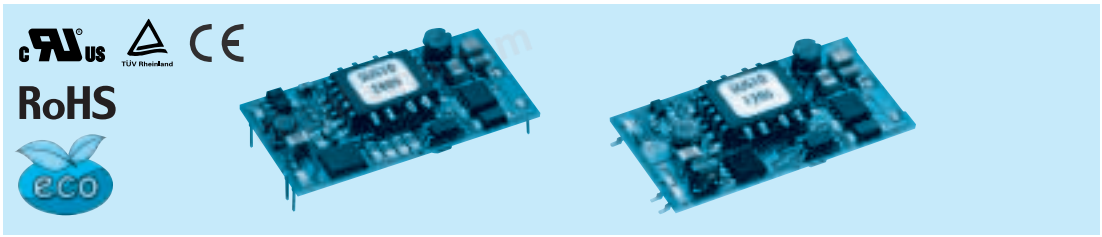
COSEL DC-DC Converters PCB Mount type

# SUS10

## Ordering information

SU S 10 12 05 B P -□

① ② ③ ④ ⑤ ⑥ ⑦ ⑧



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

| MODEL | | SUS10053R3 | SUS100505 | SUS100512 | SUS100515 | SUS10123R3 | SUS101205 | SUS101212 | SUS101215 |
|---|---|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 8.58 | 10 | 10.8 | 10.5 | 8.58 | 10 | 12 | 12 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 2.6 | 2 | 0.9 | 0.7 | 2.6 | 2 | 1 | 0.8 |

## SPECIFICATIONS

| | MODEL | | SUS10053R3 | SUS100505 | SUS100512 | SUS100515 | SUS10123R3 | SUS101205 | SUS101212 | SUS101215 |
|---|---|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC4.5 - 9 | | | | DC9 - 18 | | | |
| | CURRENT[A] | *2 | 2.12typ | 2.41typ | 2.54typ | 2.47typ | 0.872typ | 0.980typ | 1.15typ | 1.15typ |
| | EFFICIENCY[%] | *2 | 81typ | 83typ | 85typ | 85typ | 82typ | 85typ | 87typ | 87typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 2.6 | 2 | 0.9 | 0.7 | 2.6 | 2 | 1 | 0.8 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 40max | 40max | 100max | 120max | 40max | 40max | 100max | 120max |
| | RIPPLE[mVp-p] | -20 to +55℃ *3 | 80max | 80max | 120max | 120max | 80max | 80max | 120max | 120max |
| | | -40 to -20℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | RIPPLE NOISE[mVp-p] | -20 to +55℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | | -40 to -20℃ *3 | 200max | 200max | 200max | 200max | 200max | 200max | 200max | 200max |
| | TEMPERATURE REGULATION[mV] | -20 to +55℃ | 50max | 50max | 150max | 180max | 50max | 50max | 150max | 180max |
| | | -40 to +55℃ | 80max | 80max | 240max | 290max | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 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] (±3%) | | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L : ON, H : OFF) | | | | | | | |

| MODEL | | SUS10243R3 | SUS102405 | SUS102412 | SUS102415 | SUS10483R3 | SUS104805 | SUS104812 | SUS104815 |
|---|---|---|---|---|---|---|---|---|---|
| MAX OUTPUT WATTAGE[W] | | 8.58 | 10 | 12 | 12 | 8.58 | 10 | 12 | 12 |
| DC OUTPUT | VOLTAGE[V] *1 | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | 2.6 | 2 | 1 | 0.8 | 2.6 | 2 | 1 | 0.8 |

## SPECIFICATIONS

| | MODEL | | SUS10243R3 | SUS102405 | SUS102412 | SUS102415 | SUS10483R3 | SUS104805 | SUS104812 | SUS104815 |
|---|---|---|---|---|---|---|---|---|---|---|
| INPUT | VOLTAGE[V] | | DC18 - 36 | | | | DC36 - 76 | | | |
| | CURRENT[A] | *2 | 0.436typ | 0.490typ | 0.575typ | 0.575typ | 0.218typ | 0.245typ | 0.287typ | 0.287typ |
| | EFFICIENCY[%] | *2 | 82typ | 85typ | 87typ | 87typ | 82typ | 85typ | 87typ | 87typ |
| OUTPUT | VOLTAGE[V] | | 3.3 | 5 | 12 | 15 | 3.3 | 5 | 12 | 15 |
| | CURRENT[A] | | 2.6 | 2 | 1 | 0.8 | 2.6 | 2 | 1 | 0.8 |
| | LINE REGULATION[mV] | | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 60max |
| | LOAD REGULATION[mV] | | 40max | 40max | 100max | 120max | 40max | 40max | 100max | 120max |
| | RIPPLE[mVp-p] | -20 to +55℃ *3 | 80max | 80max | 120max | 120max | 80max | 80max | 120max | 120max |
| | | -40 to -20℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | RIPPLE NOISE[mVp-p] | -20 to +55℃ *3 | 120max | 120max | 150max | 150max | 120max | 120max | 150max | 150max |
| | | -40 to -20℃ *3 | 200max | 200max | 200max | 200max | 200max | 200max | 200max | 200max |
| | TEMPERATURE REGULATION[mV] | -20 to +55℃ | 50max | 50max | 150max | 180max | 50max | 50max | 150max | 180max |
| | | -40 to +55℃ | 80max | 80max | 240max | 290max | 80max | 80max | 240max | 290max |
| | DRIFT[mV] | *4 | 20max | 20max | 48max | 60max | 20max | 20max | 48max | 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] (±3%) | | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 | 3.21 - 3.42 | 4.90 - 5.21 | 11.64 - 12.36 | 14.55 - 15.45 |
| PROTECTION CIRCUIT AND OTHERS | OVERCURRENT PROTECTION | | Works over 105% of rating and recovers automatically | | | | | | | |
| | REMOTE ON/OFF | | Provided (Negative logic L : ON, H : OFF) | | | | | | | |

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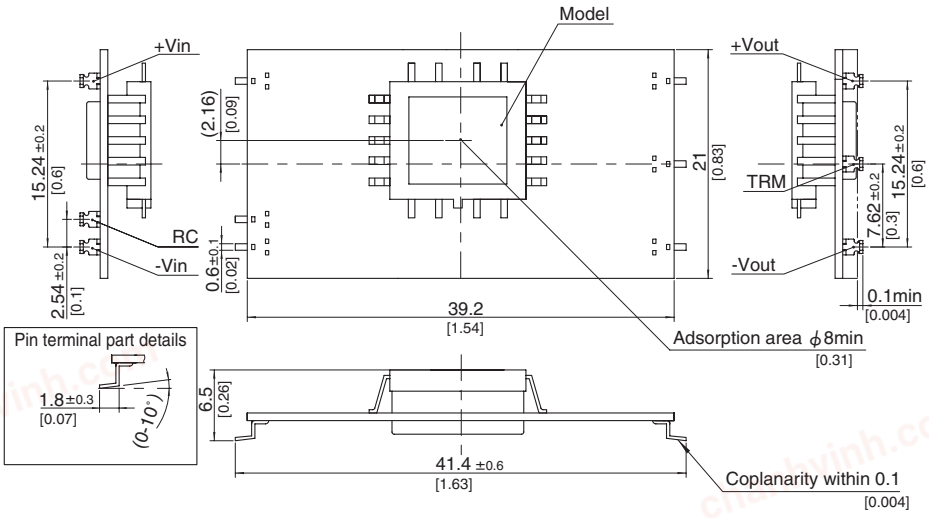
## GENERAL SPECIFICATIONS

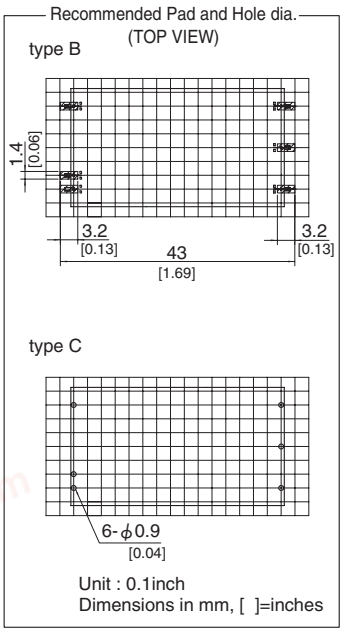
| | | |
|---|---|---|
| ISOLATION | INPUT-OUTPUT | AC500V 1minute, Cutoff current = 10mA, DC500V 50MΩ min (20±15℃) |
| ENVIRONMENT | OPERATING TEMP.,HUMID.AND ALTITUDE | -40 to +85℃, 20 - 95%RH (Non condensing) (Required Derating), 3,000m (10,000feet) max |
| | STORAGE TEMP.,HUMID.AND ALTITUDE | -40 to +100℃, 20 - 95%RH (Non condensing), 9,000m (30,000feet) max |
| | VIBRATION | 10 - 55Hz, 98.0m/s² (10G), 3minutes period, 60minutes each along X, Y and Z axis |
| | IMPACT | 490.3m/s² (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 SUW10xx12/SUW10xx15 is available as single output, +24V/+30V.
*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.

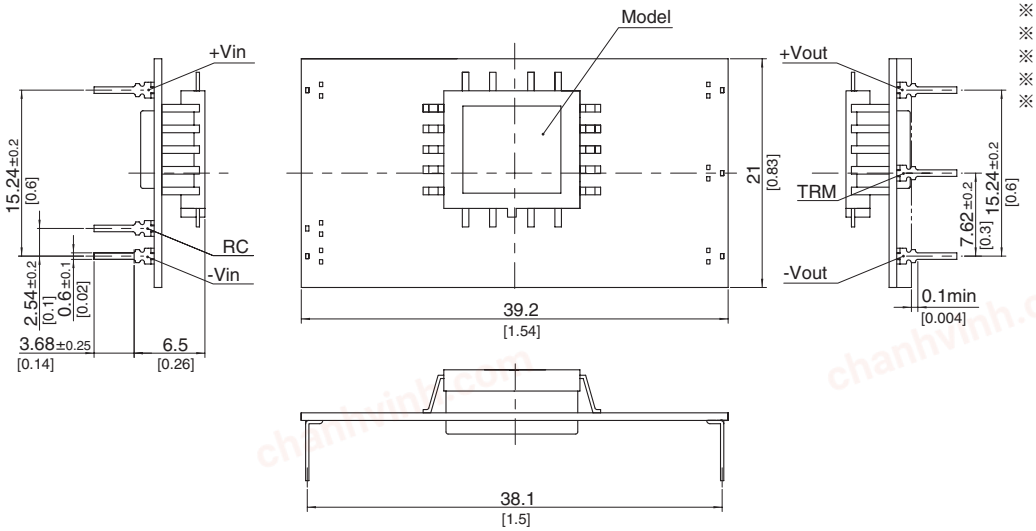
## External view

1.SMD(type B)




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

SU·SUC/SUT