

## Linear Regulator Series

# Thermal Resistance Data: SSON004X1010

## BUxxTD2WNVX Series

This application note provides the thermal resistance data of the SSON004X1010 package used for the thermal design of the BUxxTD2WNVX series linear regulator IC.

### Product Summary

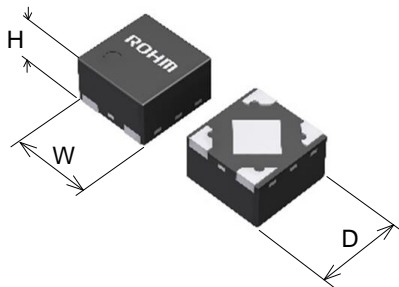
Model name: [BUxxTD2WNVX series](#)

Package name: SSON004X1010

Function: Linear regulator (LDO) IC

See [Datasheet](#) for more details.

### Package



SSON004X1010

W (typ) D (typ) H (max)

1.0 mm × 1.0 mm × 0.6 mm

### Measurement environment

Content	Standard
Measurement environment	JEDEC STANDARD JESD51-2A (Still Air)
Measurement board standard	JEDEC STANDARD JESD51-3 JESD51-7

### Thermal resistance

Configuration	$\theta_{JA}$ (°C/W)	$\Psi_{JT}$ (°C/W)
1 layer	450.2	99
4 layers	97.1	22

$\theta_{JA}$ : Thermal resistance between  
junction temperature  $T_J$  - ambient temperature  $T_A$

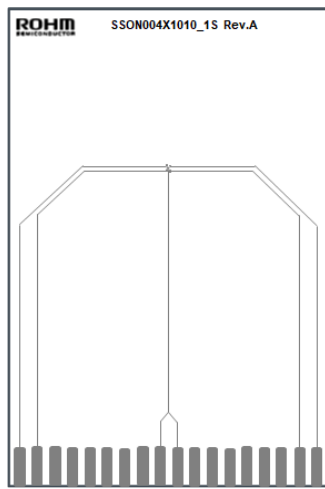
$\Psi_{JT}$ : Thermal characterization parameter between  
Junction temperature  $T_J$  -  
package surface center temperature  $T_T$

Note: The thermal resistances and thermal characterization parameters in this application note are based on measurement under a JEDEC environment and may not always be consistent with the values for actual equipment. It is necessary to consider variations in the values due to the PCB characteristics, PCB layout, parts layout, chassis shape, surrounding environment, and so on.

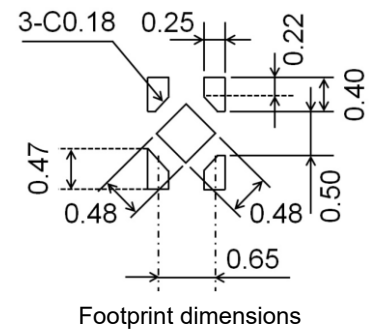
PCB specification, 1 layer (1s)

Conforms to JEDEC standard JESD51-3

Item	Value
Board thickness	1.57 mm
Board outline dimensions	76.2 mm × 114.3 mm
Board material	FR-4
Trace thickness (finish thickness)	70 μm (2 oz)
Lead width	0.254 mm
Copper foil area	Footprint



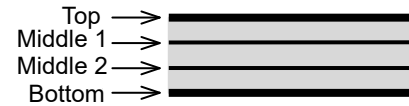
Top  
Trace layouts



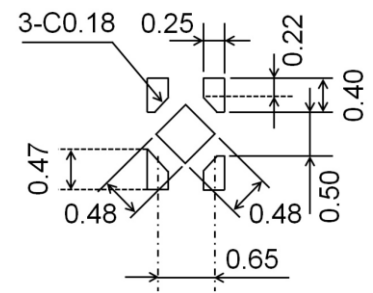
**PCB specification, 4 layers (2s2p)**

Conforms to JEDEC standard JESD51-7

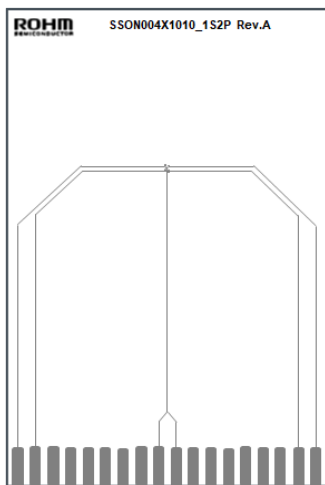
Item		Value
Board thickness		1.60 mm
Board outline dimensions		76.2 mm × 114.3 mm
Board material		FR-4
Trace thickness (finish thickness)	Top	70 μm (2 oz)
	Middle 1	35 μm (1 oz)
	Middle 2	35 μm (1 oz)
	Bottom	70 μm (2 oz)
Lead width		0.254 mm
Copper foil area	Top	Footprint
	Middle 1	5505 mm <sup>2</sup> (74.2 mm × 74.2 mm)
	Middle 2	5505 mm <sup>2</sup> (74.2 mm × 74.2 mm)
	Bottom	5505 mm <sup>2</sup> (74.2 mm × 74.2 mm)



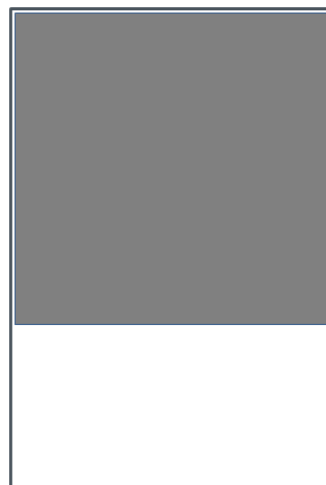
4 layer board cross sectional view



Footprint dimensions



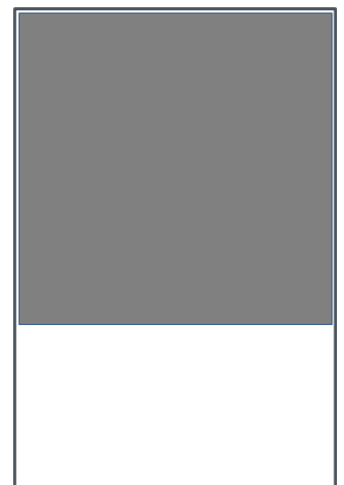
Top



Middle 1



Middle 2



Bottom

Trace layouts

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