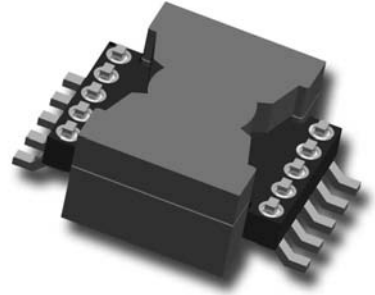


# DC-DC NS SERIES

Third generation of planar transformers

## Features

- Designed for high-current telecom power supply applications. (LM5041 - UCC3580).
- Designed with the highest efficiencies in the market.
- Designed with the lowest profiles in the market.
- Three new shapes added to our standard family.
- Designed to offer high power densities along with great reliability and repeatability.
- Designed to provide different output ratings to suit a variety of applications. (LM5030).
- Ideal for use in open loop intermediate bus converter (IBC) and closed loop voltage mode converters (LM5033).
- Designed to meet UL60950/EN60950.
- Winding design under our own unique raw material design system.



## Electrical specifications

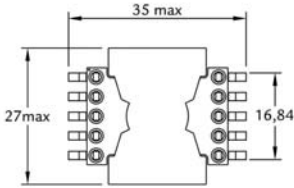
| Part Number | Input Voltage Vdc (V) | Output Voltage (V) | Output Current (A) | Power (W) | Frequency (kHz) | Duty cycle | Topology    | Inductance | Typ Leakage Inductance (μH) | Turns Ratio (Pri:Sec) | Max Total losses (W) | Recommended PWM Controller |
|-------------|-----------------------|--------------------|--------------------|-----------|-----------------|------------|-------------|------------|-----------------------------|-----------------------|----------------------|----------------------------|
| P018PP1CS1  | 36-72                 | 3,3                | 30                 | 100       | 400             | 0,45       | Push Pull   | 218μH      | 0,3                         | 9:1                   | 2                    | LM5030 - NS                |
| P018PP1CS2  | 36-72                 | 5                  | 7                  | 35        | 400             | 0,43       | Push Pull   | 97,2μH     | 0,3                         | 6:1                   | 0,75                 | LM5030 - NS                |
| P018PP1CS3  | 36-72                 | 12                 | 5                  | 60        | 400             | 0,45       | Push Pull   | 218μH      | 0,3                         | 3:1                   | 1,2                  | LM5030 - NS                |
| P020FW1CS1  | 36-72                 | 3,3                | 30                 | 100       | 300             | 0,45       | Forward     | 65μH       | 0,25                        | 6:1                   | 2                    | UCC3580 - TI               |
| P020PP1CS1  | 36-72                 | 12                 | 15                 | 180       | 300             | 0,45       | Push Pull   | 187,0μH    | 0,25                        | 10:4                  | 3,6                  | MAX5069 - Maxim            |
| P020HB1CS1  | 40-60                 | 10                 | 20                 | 200       | 300             | 0,45       | Half Bridge | 46,8μH     | 0,1                         | 5:4                   | 4                    | LM5033 - NS                |
| P020PP1CS2  | 36-72                 | 2,5                | 60                 | 150       | 300             | 0,45       | Push Pull   | 1,25mH     | 0,3                         | 8:1                   | 3                    | LM5041 - NS                |
| P026PP1CS1  | 36-72                 | 28,5               | 11                 | 310       | 150-220         | 0,48       | Push Pull   | 155,0μH    | 0,3                         | 1:1                   | 2                    | LM5035 - NS                |

# DC-DC NS SERIES

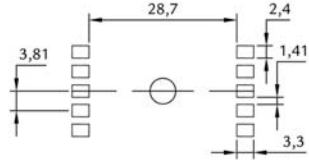
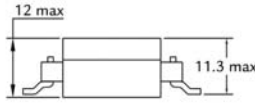
Third generation of planar transformers

Planar Transformers

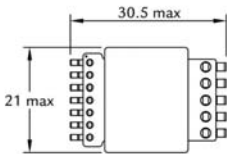
## Dimensions



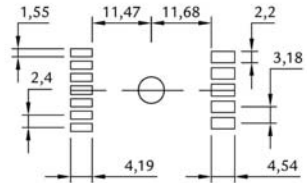
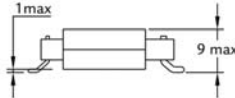
Pø26 NS Series



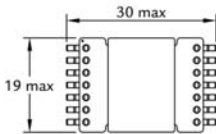
Recommended PCB layout



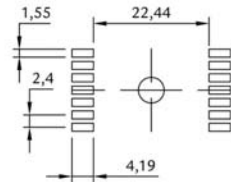
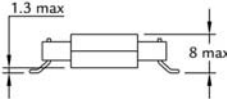
Pø20 NS Series



Recommended PCB layout



Pø18 NS Series



Recommended PCB layout

## Schematics

