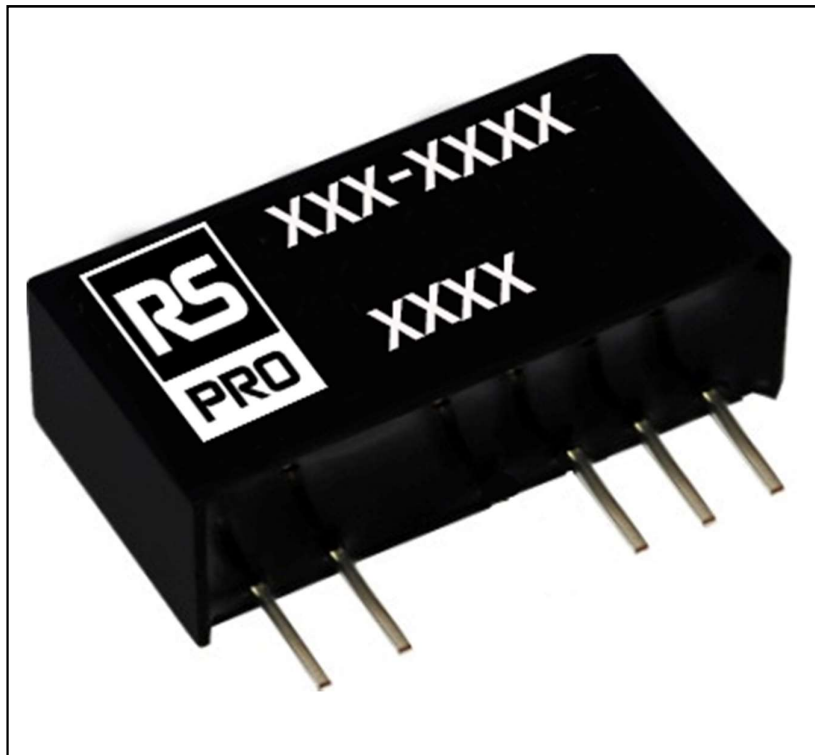


Features

- High power density
- Low ripple noise
- Short circuit protection
- High reliability
- ROHS compliant

RS PRO DC - DC Converter

RS Stock No.: 0633251 0633252 0633253 0633254
0633255 0633257 0633246 0633247 0633248
0633249 0633250



RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

Product Description

- Small volume, high power density
- Wide temperature performance at full 1 watt load: -40 °C ~+85 °C
- International standard SIP package, save PCB installation space
- Typical efficiency up to 89%
- High Reliability (MTTF≥350 ten thousand hours)

Electrical Specifications

RS Stock#	Input Voltage (Vdc)	Output Voltage (Vdc)	Output Current (mA)	Efficiency (Typ)	Maximum capacity load
0633251	5(4.5-5.5)	5	200	82%	2200uF
0633252	12(10.8-13.2)	5	200	83%	2200uF
0633253	12(10.8-13.2)	12	83	85%	1000uF
0633254	24(21.6-26.4)	5	200	83%	2200uF
0633255	24(21.6-26.4)	12	83	85%	1000uF
0633257	24(21.6-26.4)	15	67	85%	820uF
0633246	5(4.5-5.5)	±5	±100	84%	2200uF
0633247	12(10.8-13.2)	±12	±42	84%	1000uF
0633248	12(10.8-13.2)	±15	±33	84%	1000uF
0633249	24(21.6-26.4)	±5	±100	83%	2200uF
0633250	24(21.6-26.4)	±12	±42	84%	1000uF

General Specifications

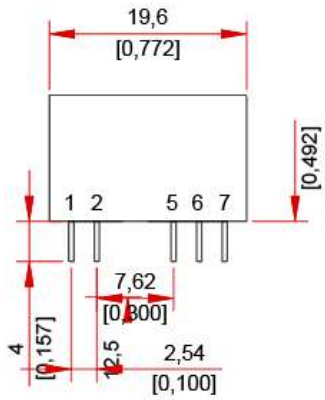
Output Voltage	DC 3.3V;.5V;9V;12V;15V;24V;±3V;.±5V;±9V±12V;±15V;±24V
----------------	---

Input Voltage Range	DC 3.3V(3.0V-3.6V); 5V(4.5V-5.5V); 12V(10.8V-13.2V); 15V(13.5V-16.5V); 24V(21.6V-26.4V)
Power Rating	1W
Input Voltage Nominal	3.3V;5V;12V;15V;24V
Output Current	See Electrical Specifications
Mounting Type	SIP
Isolated	Yes
Number of Outputs	1
Output Voltage Adjustment Range	nonsupport
Package	Plastic pipe installation
Isolation Voltage	6000Vdc 1Min
Width	19.6mm
Depth	12.5mm
Length	9.5mm
Railway Approved	No
Load Regulation	15% Max
Medical Approved	No
Efficiency	81%-88%

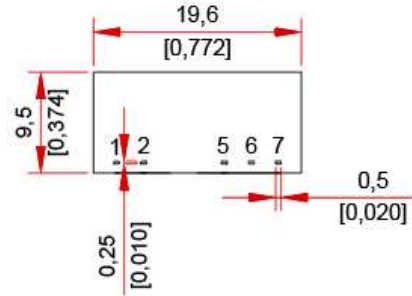
Operation Environment

Maximum Operating Temperature	85°C
Minimum Operating Temperature	-40°C

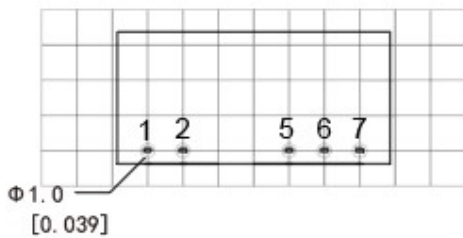
Interview Diagram



Bottom attempting



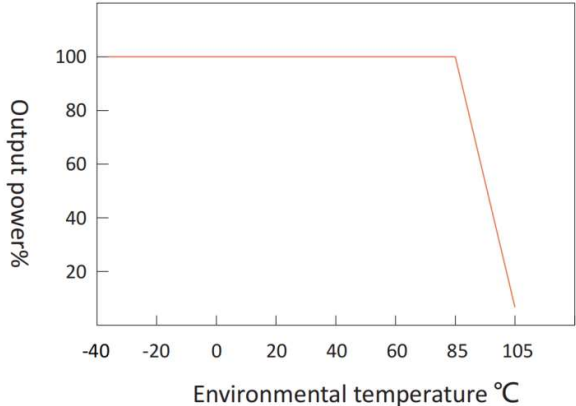
Recommended PCB size diagram



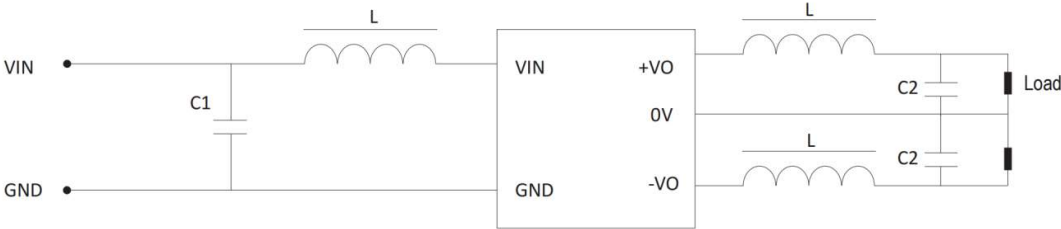
Pin definition

Pin	Single	Dual
1	Vin	Vin
2	Gnd	Gnd
5	0V	-Vo
6	No Pin	0V
7	+Vo	+Vo

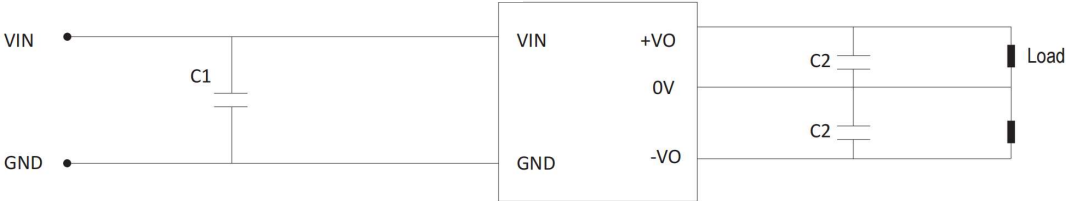
Temperature reduction curve



LC filtering circuit



Recommended basic application circuits



Input		Output	
Input Voltage	C1	Output Voltage	C2
3.3V/5V	10UF	±3.3V/±5V	10UF
12V	4.7UF	±12V	4.7UF
15V	2.2UF	±15V	2.2UF
24V	1UF	±24V	1UF

Try To Avoid No-load Use: If the load power consumption is less than 10% of the rated output power of the module, it is recommended to connect a dummy load to the output terminal or select a module with a lower rated power.

The dummy load (resistance) can be calculated by 10% of the rated power of the module, and the resistance value is $R=U^2 / (10\% \times 1W)$.

Avoid Excessive Output External Capacitance: The capacity value of the output external capacitor C2 should not be too large, otherwise it is easy to cause overcurrent or bad startup when the module is started. The speciC value should be selected according to the external capacitor table.

The input of this series does not support parallel use of hot plug and output.

For situations requiring high ripple noise, external LC filter circuit should be connected, and the resonant frequency of LC filter should be far less than the switching frequency of DC/DC module to prevent mutual interference, resulting in output ripple increase or module damage, please refer to:LC filtering circuit