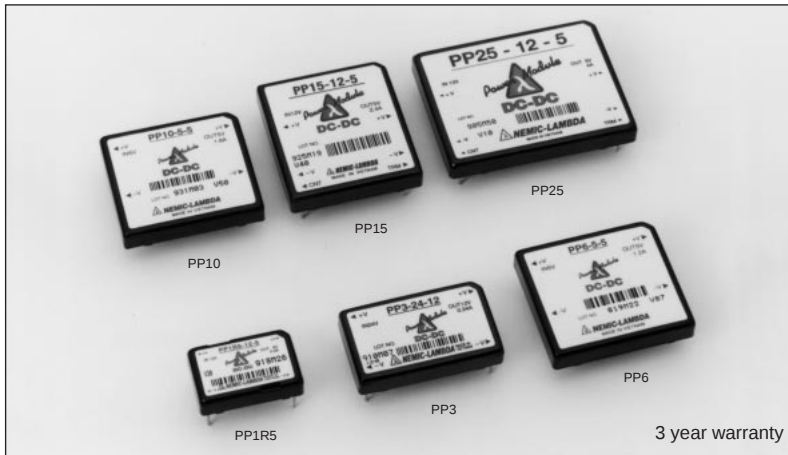




Model name

PP 15-48-5

PP: Name of series
15: Output power
48: Nominal output voltage
5: Nominal input voltage

Features

- Compact and single output DC-DC converter
Ultra-thin profile: 8mm
- Wide input voltage range
DC5V input: DC4.5 ~ 7.2V (PP25: 4.7V ~ 7.2V)
DC12V input: DC9 ~ 18V (PP1R5 ~ PP10: 8V ~ 16.5V)
DC24V input: DC18 ~ 36V (PP1R5 ~ PP10: 18V ~ 32V)
DC48V input: DC36 ~ 72V (PP1R5 ~ PP10: 32V ~ 63V)
- Operating temperature: -20 ~ +71°C
- Isolation between input and output
- PP15, PP25: Output voltage variable, on/off control
- 3 year warranty

Specifications

1. Input voltage range	DC5V input: DC4.5 ~ 7.2V (PP25: 4.7 ~ 7.2V) DC12V input: DC9 ~ 18V (PP1R5 ~ PP10: 8 ~ 16.5V) DC24V input: DC18 ~ 36V (PP1R5 ~ PP10: 18 ~ 32V) DC48V input: DC36 ~ 72V (PP1R5 ~ PP10: 32 ~ 63V)
2. Output voltage range	Fixed (PP15, PP25: +5% available with external resistor)
3. Cooling	Convection cooling
4. Operating ambient temperature	-20 ~ +71°C PP1R5 ~ PP10: Output derating -20°C ~ +50°C: 100%, +71°C: 20% PP15, PP25: Output derating -20°C ~ +55°C: 100%, +71°C: 50% (5V input of PP25: Output derating -20°C ~ +50°C: 100%, +71°C: 50%) (48V input of PP25: output derating -20°C ~ +40°C: 100%, +71°C: 40%)
5. Withstand voltage	Input-output, Input-case: 500VAC for 1 min.
6. Functions	Over current protection, PP15, PP25: Remote on/off control & Over voltage protection

Product lineup

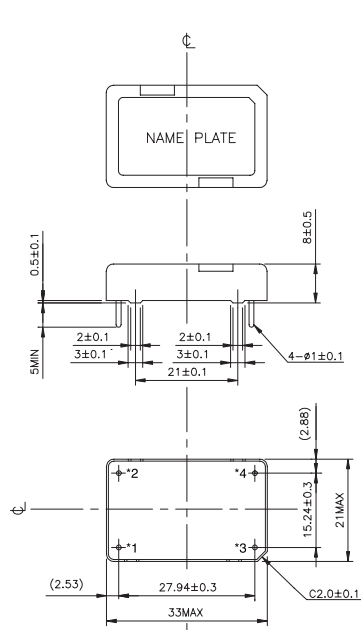
Model name		Output voltage	Output current	Output power	UL	CSA	EN
PP1R5	PP1R5-5-5	5V	0.3A	1.5W			
	PP1R5-5-12	12V	0.12A	1.44W			
	PP1R5-5-15	15V	0.1A	1.5W			
	PP1R5-12-5	5V	0.3A	1.5W			
	PP1R5-12-12	12V	0.12A	1.44W			
	PP1R5-12-15	15V	0.1A	1.5W			
	PP1R5-24-5	5V	0.3A	1.5W			
	PP1R5-24-12	12V	0.12A	1.44W			
	PP1R5-24-15	15V	0.1A	1.5W			
	PP1R5-48-5	5V	0.3A	1.5W			
PP1R5-48-12	12V	0.12A	1.44W				
PP1R5-48-15	15V	0.1A	1.5W				
PP3	PP3-5-5	5V	0.6A	3.0W			
	PP3-5-12	12V	0.24A	2.88W			
	PP3-5-15	15V	0.2A	3.0W			
	PP3-12-5	5V	0.6A	3.0W			
	PP3-12-12	12V	0.24A	2.88W			
	PP3-12-15	15V	0.2A	3.0W			
	PP3-24-5	5V	0.6A	3.0W	○	○	○
	PP3-24-12	12V	0.24A	2.88W	○	○	○
	PP3-24-15	15V	0.2A	3.0W	○	○	○
	PP3-48-5	5V	0.6A	3.0W	○	○	○
PP3-48-12	12V	0.24A	2.88W	○	○	○	
PP3-48-15	15V	0.2A	3.0W	○	○	○	
PP6	PP6-5-5	5V	1.2A	6.0W			
	PP6-5-12	12V	0.5A	6.0W			
	PP6-5-15	15V	0.4A	6.0W			
	PP6-12-5	5V	1.2A	6.0W			
	PP6-12-12	12V	0.5A	6.0W			
	PP6-12-15	15V	0.4A	6.0W			
	PP6-24-5	5V	1.2A	6.0W			
	PP6-24-12	12V	0.5A	6.0W			
	PP6-24-15	15V	0.4A	6.0W			
	PP6-48-5	5V	1.2A	6.0W			
PP6-48-12	12V	0.5A	6.0W				
PP6-48-15	15V	0.4A	6.0W				

Model name		Output voltage	Output current	Output power	UL	CSA	EN
PP10	PP10-5-5	5V	1.6A	8.0W			
	PP10-5-12	12V	0.7A	8.4W			
	PP10-5-15	15V	0.6A	9.0W			
	PP10-12-5	5V	2.0A	10.0W			
	PP10-12-12	12V	0.9A	10.8W			
	PP10-12-15	15V	0.7A	10.5W			
	PP10-24-5	5V	2.0A	10.0W			
	PP10-24-12	12V	0.9A	10.8W			
	PP10-24-15	15V	0.7A	10.5W			
	PP10-48-3.3	3.3V	2.0V	6.6W			
	PP10-48-5	5V	2.0A	10.0W			
PP10-48-12	12V	0.9A	10.8W				
PP10-48-15	15V	0.7A	10.5W				
PP15	PP15-12-5	5V	2.4A	12W			
	PP15-12-12	12V	1.3A	15.6W			
	PP15-12-15	15V	1.0A	15W			
	PP15-24-5	5V	2.4A	12W			
	PP15-24-12	12V	1.3A	15.6W			
	PP15-24-15	15V	1.0A	15W			
	PP15-48-3.3	3.3V	2.4A	7.92W			
	PP15-48-5	5V	2.4A	12W	○	○	○
	PP15-48-12	12V	1.3A	15.6W			
PP15-48-15	15V	1.0A	15W				
PP25	PP25-5-3.3	3.3V	3.0A	9.9W			
	PP25-5-5.2	5.2V	2.9A	15.08W			
	PP25-12-5	5V	4.0A	20W			
	PP25-12-12	12V	2.1A	25.2W	○	○	○
	PP25-12-15	15V	1.7A	25.5W			
	PP25-24-5	5V	4.0A	20W			
	PP25-24-12	12V	2.1A	25.2W	○	○	○
	PP25-24-15	15V	1.7A	25.5W			
	PP25-48-3.3	3.3V	5.0A	16.5W			
	PP25-48-5	5V	4.0A	20W	○	○	○
	PP25-48-12	12V	2.1A	25.2W	○	○	○
PP25-48-15	15V	1.7A	25.5W				

○ : Safety standard approved

- Request customer specification for further details of specifications, outline, characteristics, etc.
Read the instruction manual before usage.
- Contact us about delivery before ordering.

■ **PP3**



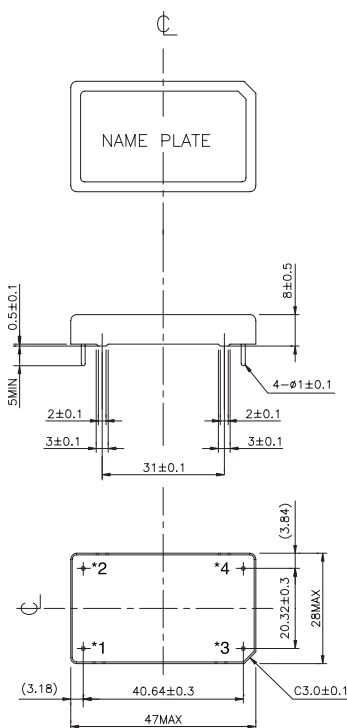
Terminal assignments

Terminal assignments

*1	+V	□	INPUT
*2	-V		
*3	+V	□	OUTPUT
*4	V		

Case: Copper (Thickness 0.4mm)
Weight: 15g

■ PP6

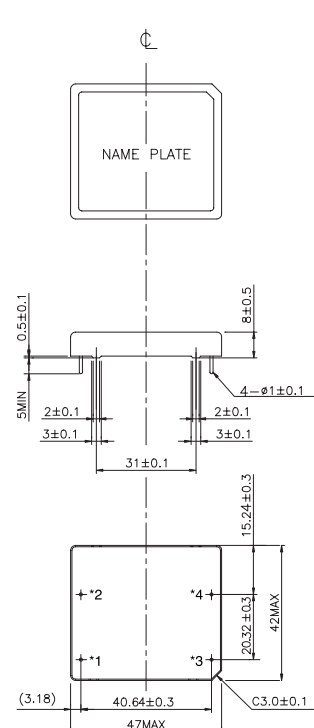


Terminal assignments

Terminal assignments

*1	+V	□	INPUT
*2	-V		
*3	+V	□	OUTPUT
*4	-V		

Case: Copper (Thickness 0.4mm)
Weight: 25g



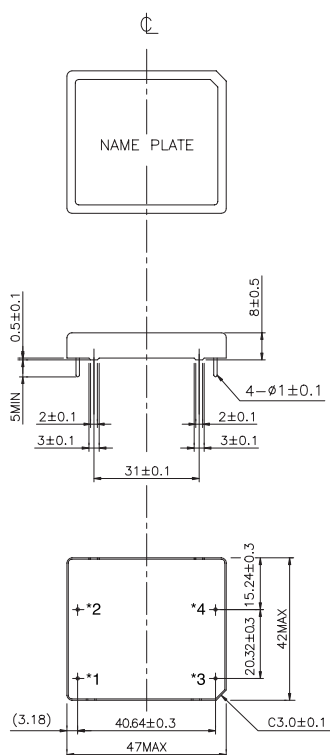
Terminal assignments

Terminal assignments

*1	+V	□	INPUT
*2	-V		
*3	+V	□	OUTPUT
*4	V		

Case: Copper (Thickness 0.4mm)
Weight: 40g

■ PP10



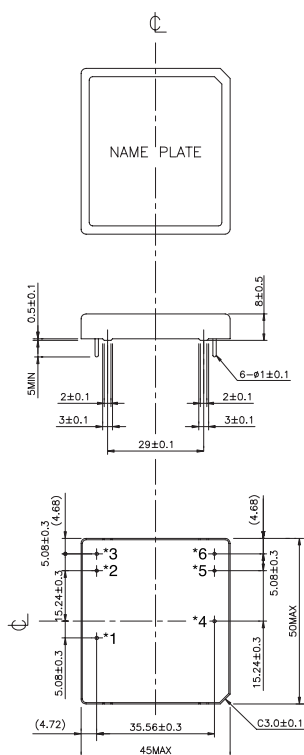
Terminal assignments

Terminal assignments

*1	+V	□ INPUT
*2	-V	
*3	+V	□ OUTPUT
*4	-V	

Case: Copper (Thickness 0.4mm)
Weight: 40g

PP15



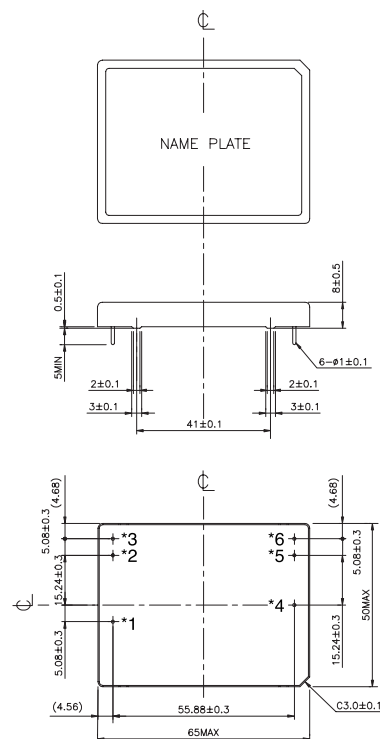
Terminal assignments

Terminal assignments

*1	+V	□	INPUT
*2	-V		
*3	CNT		
*4	+V	□	OUTPUT
*5	-V		

*5 -V - OUTPUT
*6 TRM
Case: Copper (Thickness 0.4mm)
Weight: 55g

PP25

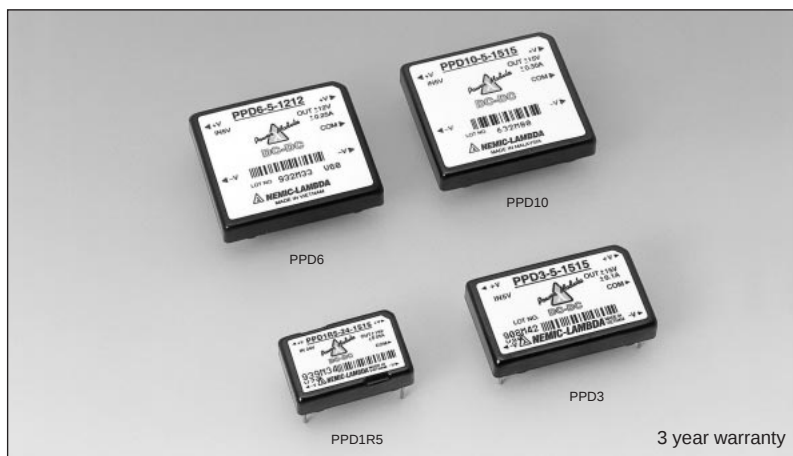


Terminal assignments

```
*1 +V  INPUT
*2 -V  INPUT
*3CNT
*4 +V  INPUT
```

*4 +V  OUTPUT
*5 -V 
*6 TRM

Case: Copper (Thickness 0.4mm)
Weight: 65g



Model name

PPD 3-48-1212

Name of series Output power Nominal input voltage Nominal output voltage

Features

- Compact and dual output DC-DC converter
Ultra-low profile: 8mm
- Wide input voltage range
DC5V input: DC4.5 ~ 7.2V
DC12V input: DC8 ~ 16.5V
DC24V input: DC18 ~ 32V
DC48V input: DC32 ~ 63V
- Operating temperature: -20 ~ +71°C
- Isolation between input and output
- 3 year warranty

Specifications

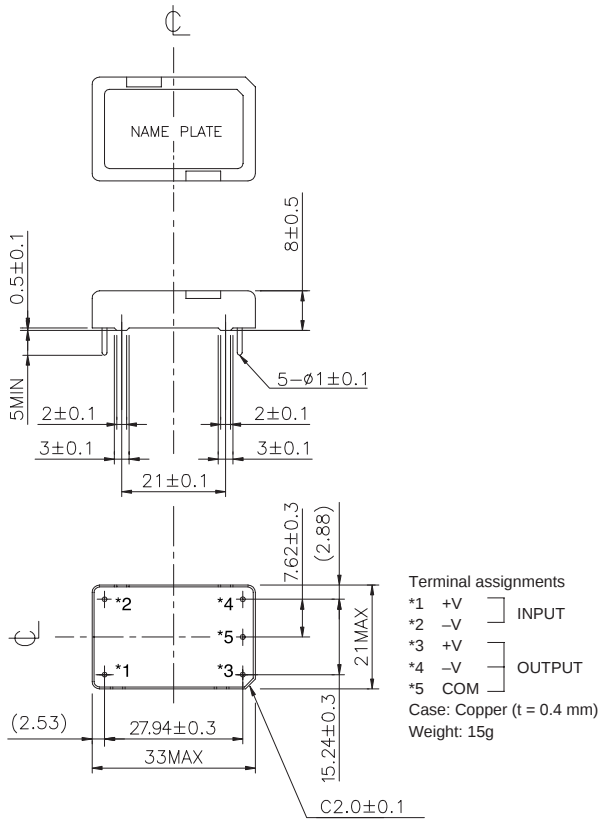
1. Input voltage range	DC5V input: DC4.5 ~ 7.2V DC12V input: DC8 ~ 16.5V DC24V input: DC18 ~ 32V DC48V input: DC32 ~ 63V
2. Output voltage range	Fixed
3. Cooling	Convection cooling
4. Operating ambient temperature (Standard mounting)	-20 ~ +71°C PPD1R5, PPD3: Output derating -20°C ~ +50°C: 100%, +71°C: 20% PPD6, PPD10: Output derating -20°C ~ +55°C: 100%, +71°C: 20%
5. Withstand voltage	Input-output, Input-case: 500VAC for 1 min.
6. Functions	Over voltage protection

Product lineup

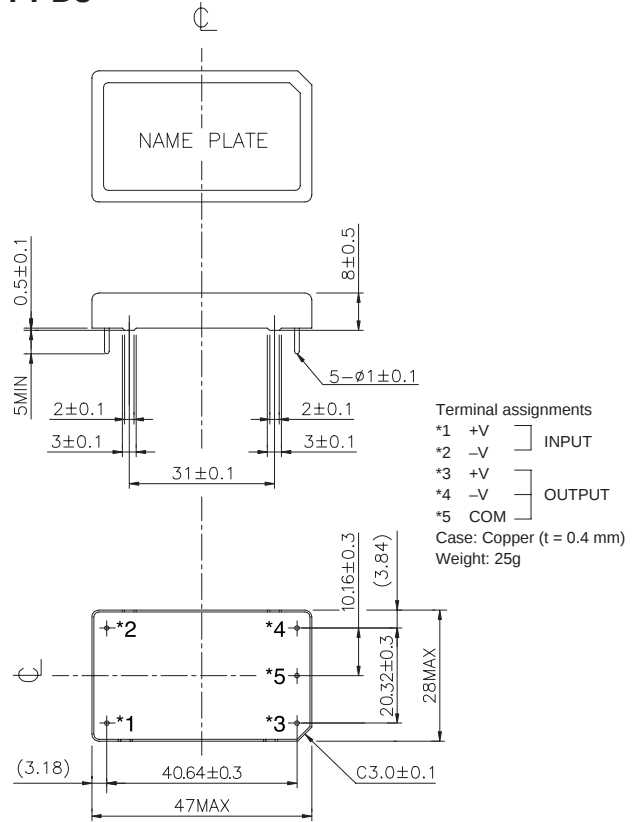
Model name		Output voltage	Output current	Output power
PPD1R5	PPD1R5-5-1212	± 12V	± 60mA	1.44W
	PPD1R5-5-1515	± 15V	± 50mA	1.5W
	PPD1R5-12-1212	± 12V	± 60mA	1.44W
	PPD1R5-12-1515	± 15V	± 50mA	1.5W
	PPD1R5-24-1212	± 12V	± 60mA	1.44W
	PPD1R5-24-1515	± 15V	± 50mA	1.5W
	PPD1R5-48-1212	± 12V	± 60mA	1.44W
	PPD1R5-48-1515	± 15V	± 50mA	1.5W
PPD3	PPD3-5-1212	± 12V	± 120mA	2.88W
	PPD3-5-1515	± 15V	± 100mA	3.0W
	PPD3-12-1212	± 12V	± 120mA	2.88W
	PPD3-12-1515	± 15V	± 100mA	3.0W
	PPD3-24-1212	± 12V	± 120mA	2.88W
	PPD3-24-1515	± 15V	± 100mA	3.0W
	PPD3-48-1212	± 12V	± 120mA	2.88W
	PPD3-48-1515	± 15V	± 100mA	3.0W
PPD6	PPD6-5-1212	± 12V	± 250mA	6.0W
	PPD6-5-1515	± 15V	± 200mA	6.0W
	PPD6-12-1212	± 12V	± 250mA	6.0W
	PPD6-12-1515	± 15V	± 200mA	6.0W
	PPD6-24-1212	± 12V	± 250mA	6.0W
	PPD6-24-1515	± 15V	± 200mA	6.0W
	PPD6-48-1212	± 12V	± 250mA	6.0W
	PPD6-48-1515	± 15V	± 200mA	6.0W
PPD10	PPD10-5-1212	± 12V	± 350mA	8.4W
	PPD10-5-1515	± 15V	± 300mA	9.0W
	PPD10-12-1212	± 12V	± 450mA	10.8W
	PPD10-12-1515	± 15V	± 350mA	10.5W
	PPD10-24-1212	± 12V	± 450mA	10.8W
	PPD10-24-1515	± 15V	± 350mA	10.5W
	PPD10-48-1212	± 12V	± 450mA	10.8W
	PPD10-48-1515	± 15V	± 350mA	10.5W

- Request customer specification for further details of specifications, outline, characteristics, etc.
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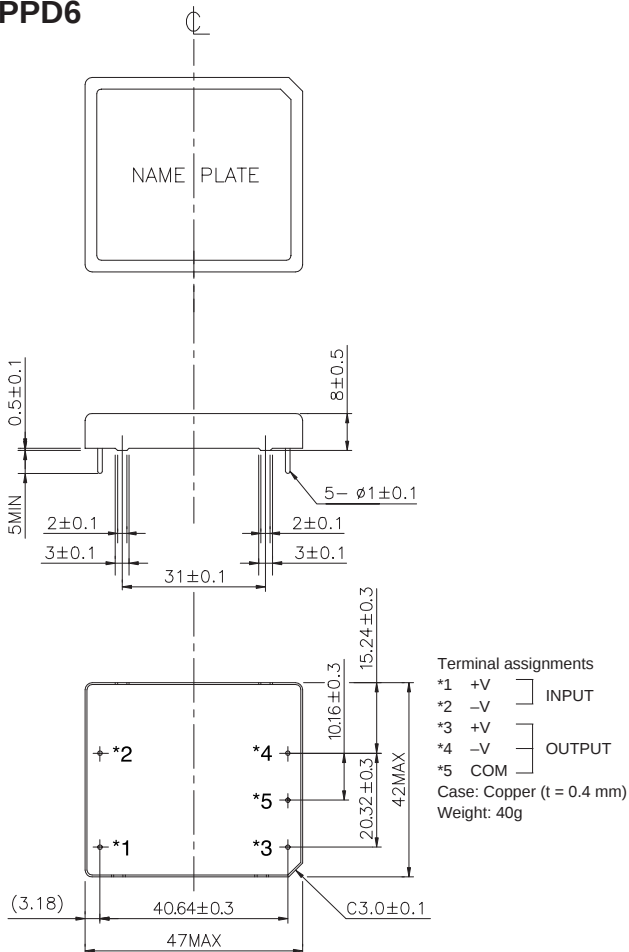
PPD1R5



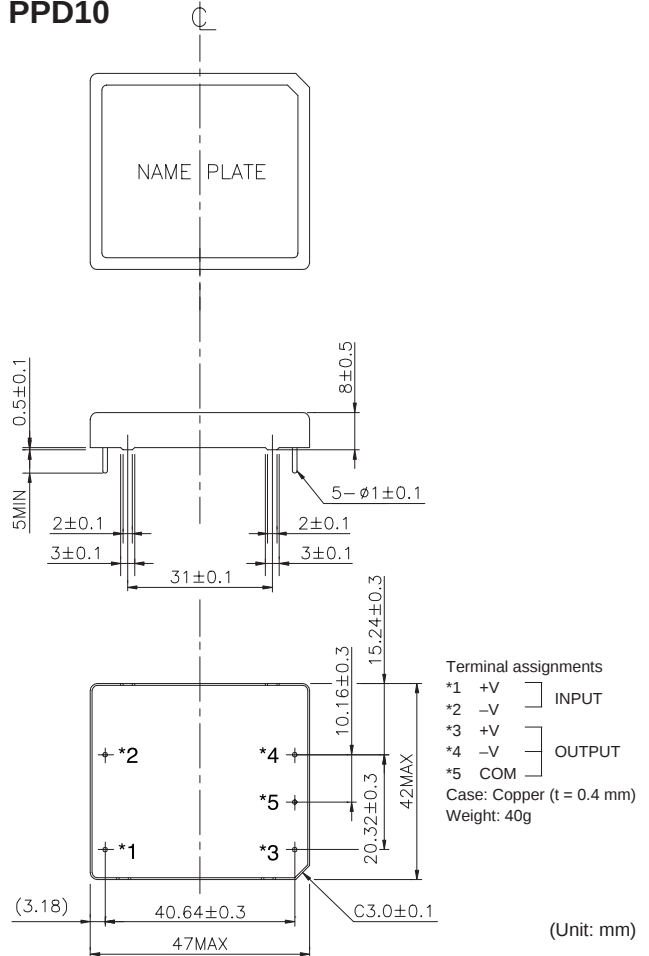
PPD3



PPD6



PPD10



(Unit: mm)