

# Power Supplies

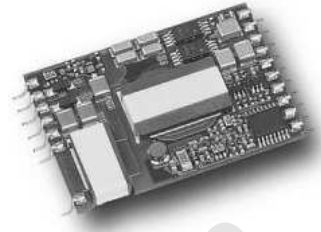
## CF Series CFP10W/CFR15W/CFT30W Type

### DC to DC Converters

### Distributed Power Supplies for Systems, Insulation Type

#### FEATURES

- This is an insulated onboard type product delivering among the best efficiency in the industry.  
This product delivers an efficiency of 91% (30W products) owing to our unique synchronous rectification circuitry.
- This is an SMD onboard type, offering the lowest height profiles in the industry.  
By optimizing mounting methods, we have been able to achieve a thickness of only 4.0mm (10W).
- Wide operating temperature range from -40 to +85°C with natural air cooling (No derating).
- Wide input voltage range (DC.36 to 75V)
- Parallel operation is possible.
- Remote ON-OFF function.
- Various protective functions(output overvoltage protection, output overcurrent protection and output undervoltage protection)
- Alarm signal output function.
- It is lead-free compatible.



#### PRODUCT IDENTIFICATION

CFP 033 - 3R0  
(1) (2) (3)

- (1) Series name (CFP: 10W, CFR: 15W, CFT: 30W type)  
(2) Rated output voltage  
(3) Rated output current

#### PART NUMBERS AND RATINGS

Output voltage (V)	10W Type		15W Type		30W Type	
	Current(A)	Part No.	Current(A)	Part No.	Current(A)	Part No.
5.2	2	CFP052-2R0				
5	2	CFP050-2R0	3	CFR050-3R0		
3.3	3	CFP033-3R0	4.5	CFR033-4R5	9	CFT033-09R0
2.5	3	CFP025-3R0	4.5	CFR025-4R5	10	CFT025-10R
1.8	3	CFP018-3R0	4.5	CFR018-4R5	11	CFT018-11R
1.5	3.5	CFP015-3R5	5.2	CFR015-5R2		

#### SPECIFICATIONS AND STANDARDS

Type		CFP10W	CFR15W	CFT30W
Input voltage E <sub>dc</sub>	V	36 to 60[Continuation]/ 75[Transient 10ms]	36 to 60[Continuation]/ 75[Transient 10ms]	36 to 60[Continuation]/ 75[Transient 10ms]
Output voltage E <sub>dc</sub>	V	1.5, 1.8, 2.5, 3.3, 5, 5.2	1.5, 1.8, 2.5, 3.3, 5	1.8, 2.5, 3.3
Maximum output power*1	W	10	15	30
Efficiency	%	88typ.[3.3V output]	89typ.[3.3V output]	91typ.[3.3V output]
Ripple noise E <sub>p-p</sub>	mV	50max.	50max.	50max.
Start up time	ms	50typ.	50typ.	50typ.
Overvoltage protection*2		Yes(Output voltage shut-down type)		
Overcurrent protection*2		Yes(Output voltage shut-down type)		
Alarm output		Yes		
Overheat protection		No		
Remote ON-OFF		Yes		
Remote sensing		No		
Parallel operation		Possible		
Output voltage external variable function		No		
Safety standards		UL60950, CSA C22.2 No.950-95(C-UL), EN60950(TUV) approval pending		
External dimensions	mm	4.3×27.2×37.3[H×W×L]	4.3×31.2×37.3[H×W×L]	4.5×42.4×45[H×W×L]
Weight	g	8typ.	8typ.	17typ.
Mounting method		Mounted from the terminal side (soldered).		

\*1 Please note that the maximum output voltage will vary depending on the output voltage. Provisions for derating due to the ambient temperature are not required(100% at +85°C).

\*2 Recovery can be achieved by re-applying input or by operating the on/off control on the remote (after an interval of about 1 sec.).

# Power Supplies

## DC to DC Converters

### Distributed Power Supplies for Systems, Insulation Type

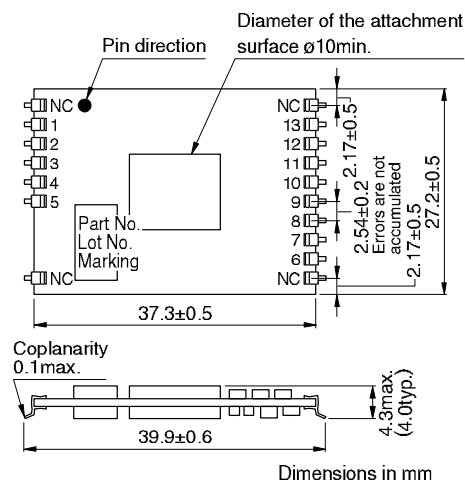
## CF Series CFP10W/CFR15W/CFT30W Type

#### COMMON SPECIFICATIONS

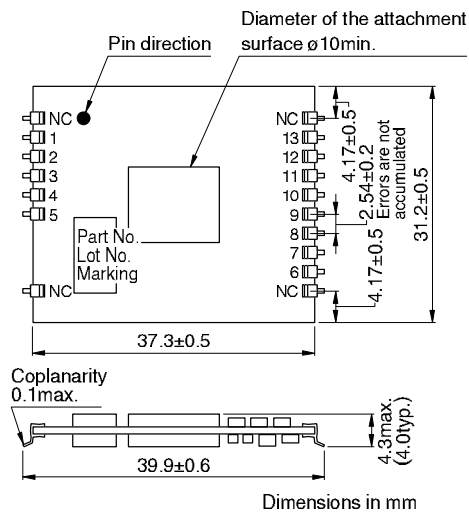
Temperature range	Operating(°C)	-40 to +85[Ambient temperature of the power supply]
	Storage(°C)	-40 to +85[Ambient temperature of the power supply]
Humidity range	Operating(%)RH	20 to 85[Maximum wet-bulb temperature: 38°C, without dewing]
	Storage(%)RH	10 to 95[Maximum wet-bulb temperature: 38°C, without dewing]
Cooling conditions	Natural cooling[0.2ms]	
Vibration	Number of vibration: 10 to 55Hz, Sweep time: 1s, All amplitude 1.52mmp-p, Vibration time: X, Y, Z directions, each 2h	
Shock	Acceleration 100G, Half sine wave, Pulse Duration: 6ms, each directions 3 times, total 18 times	
Withstand voltage	Input terminal to output terminal: DC 1.5kV[1min., cutout current 2mA]	

#### SHAPES AND DIMENSIONS

##### 10W/CFP TYPE



##### 15W/CFR TYPE

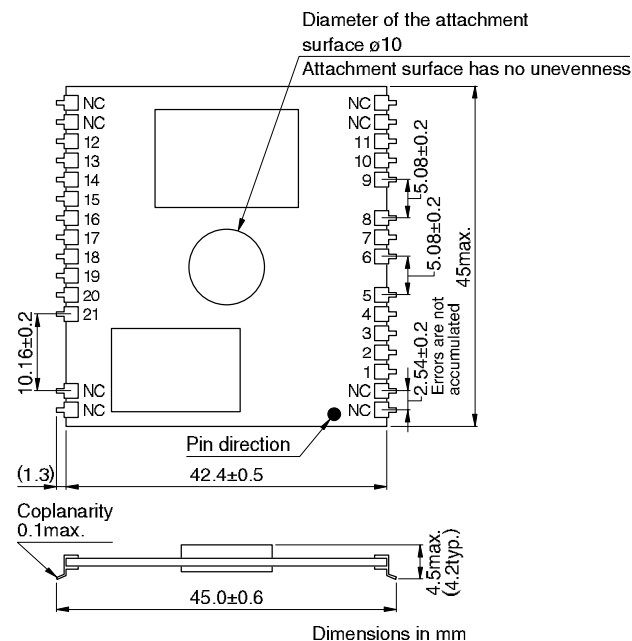


#### TERMINAL FUNCTIONS

##### 10W/15W TYPE

1	+Vout	DC output terminal(+)
2	+Vout	DC output terminal(+)
3	+Vout	DC output terminal(+)
4	-Vout	DC output terminal(-)
5	-Vout	DC output terminal(-)
6	ALM	Alarm output terminal
7	RC	Remote ON-OFF terminal
8	PO	All startup or all off
9	NC	
10	+Vin	DC input terminal(+)
11	+Vin	DC input terminal(+)
12	-Vin	DC input terminal(-)
13	-Vin	DC input terminal(-)

##### 30W/CFT TYPE



#### TERMINAL FUNCTIONS

##### 30W TYPE

1	ALM	Alarm output terminal
2	NC	
3	RC	Remote ON-OFF terminal
4	NC	
5	PO	All startup or all off.
6	-Vin	DC input terminal(-)
7	-Vin	DC input terminal(-)
8	-Vin	DC input terminal(-)
9	+Vin	DC input terminal(+)
10	+Vin	DC input terminal(+)
11	+Vin	DC input terminal(+)
12	+Vout	DC output terminal(+)
13	+Vout	DC output terminal(+)
14	+Vout	DC output terminal(+)
15	+Vout	DC output terminal(+)
16	-Vout	DC output terminal(-)
17	-Vout	DC output terminal(-)
18	-Vout	DC output terminal(-)
19	-Vout	DC output terminal(-)
20	-Vout	DC output terminal(-)
21	-Vout	DC output terminal(-)