

# Series 7CPR

**7.5 to 9 W, regulated**  
**Compact size: 2" x 1" x 0.4"**

- Single and dual output
- High efficiency up to 85 %
- Wide input range

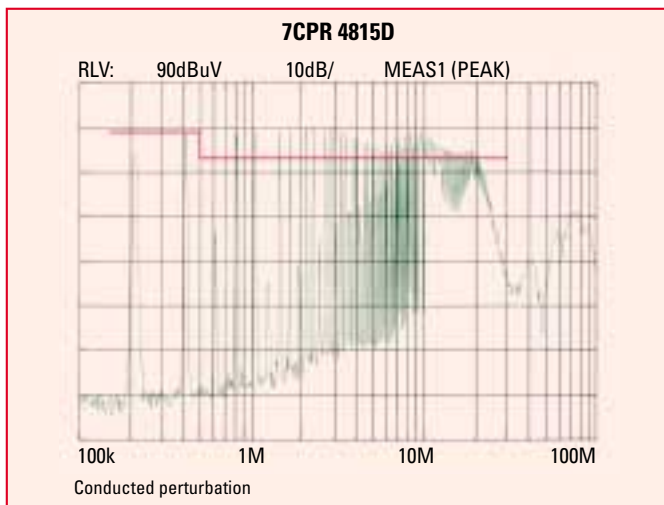


Regulated DC/DC Converters

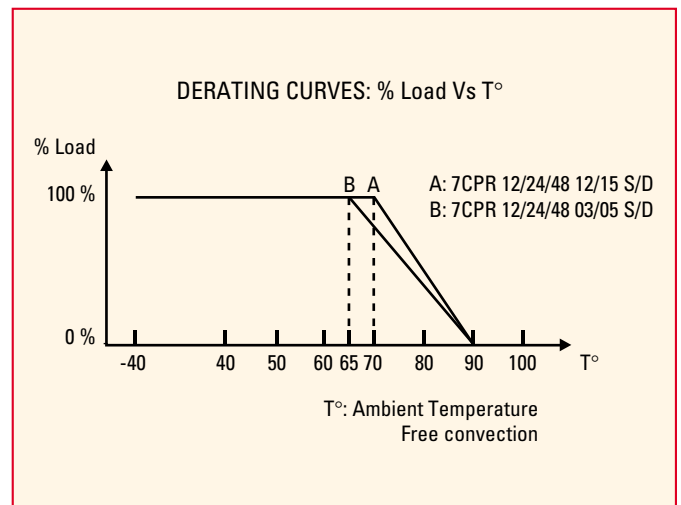
## Models

Models	Input Specifications			Output Specifications				
	Minimum	Maximum	Nominal	+ Output		- Output		Power
	(VDC)	(VDC)	(VDC)	Vout (VDC)	Iout (mA)	Vout (VDC)	Iout (mA)	
7CPR 1203S	9.5	18	12	3.3	2300			7.5
7CPR 1205S	9.5	18	12	5	1500			7.5
7CPR 1212S	9.5	18	12	12	750			9
7CPR 1215S	9.5	18	12	15	600			9
7CPR 2403S	18	36	24	3.3	2300			7.5
7CPR 2405S	18	36	24	5	1500			7.5
7CPR 2412S	18	36	24	12	750			9
7CPR 2415S	18	36	24	15	600			9
7CPR 4803S	36	72	48	3.3	2300			7.5
7CPR 4805S	36	72	48	5	1500			7.5
7CPR 4812S	36	72	48	12	750			9
7CPR 4815S	36	72	48	15	600			9
7CPR 1205D	9.5	18	12	5	750	5	750	7.5
7CPR 1212D	9.5	18	12	12	375	12	375	9
7CPR 1215D	9.5	18	12	15	300	15	300	9
7CPR 2405D	18	36	24	5	750	5	750	7.5
7CPR 2412D	18	36	24	12	375	12	375	9
7CPR 2415D	18	36	24	15	300	15	300	9
7CPR 4805D	36	72	48	5	750	5	750	7.5
7CPR 4812D	36	72	48	12	375	12	375	9
7CPR 4815D	36	72	48	15	300	15	300	9

## EMC curve



## Derating curves



# Electrical specifications

Parameters	Conditions	Single	Dual	Single	Dual	Single	Dual
Nominal input voltage	Tc = - 40 to + 90°C	12 V		24 V		48 V	
Input voltage range	Iout = 0 to 100 %	9.5 to 18 V		18 to 36V		36 to 72 V	
Input over voltage	Time period = 0.1 s	20 V		40 V		80 V	
No load input current	Vin nom.	30 mA		15 mA		8 mA	
Input current max.	Vin min.; Iout max.	1200 mA		600 mA		300 mA	
Input filter		PI filter					
Output voltage accuracy	Vin nom.; Iout nom.	3.3 V	± 2 %		± 2 %	± 2 %	
		5 V			± 1 %		
		12 V/15 V			± 0.5 %		
Load regulation	10 to 100 % of Iout	3.3 V	2 %		2 %	2 %	
		5 V			2 %		
		12 V/15 V			1 %		
Line regulation	Vin min. to Vin max.	3.3 V	± 1 %		± 1 %	± 1 %	
	5 V/12 V/15 V				± 0.5 %		
Limitation range	Vout - 4 %	180 % of Iout					
Output ripple peak to peak	BW = 20 MHz	3.3 V	150 mV		150 mV	150 mV	
		5 V			200 mV		
		12 V/15 V			150 mV		
Output over voltage protection		YES, zener diode across output pins					
Short-circuit protection		YES					
Efficiency	Vin nom.; Iout nom.	3.3 V	70 %		70 %	70 %	
		5 V			80 %		
		12 V/15 V			85 %		
Switching Frequency	Fixed	220 kHz					
Isolation	1 Min. In/Out	1500 VDC					
Isolation resistance	500 VDC	> 10 GΩ					
I/O coupling capacitor	Tc = + 25°C; RH = 48 %	220 pF at 100 Hz					
Shutdown		YES, low logic level, as option					
Synchronization		YES, as option					
Thermal protection		Tc > + 110°C					
Operating temperature range	Ta:	- 40 to + 75°C					
Storage temperature	Ts:	- 40 to + 105°C					
Maximum case temperature	Tc:	+ 90°C					
Temperature coefficient	Tc = - 40 to + 90°C	< 0.02 %/°C					
Case material	UL94V-0	Plastic box					
MTBF (MIL-HDBK-217-F)	Ground bening Ta = + 25°C	> 1 400 000 h					
Weight		30 g					

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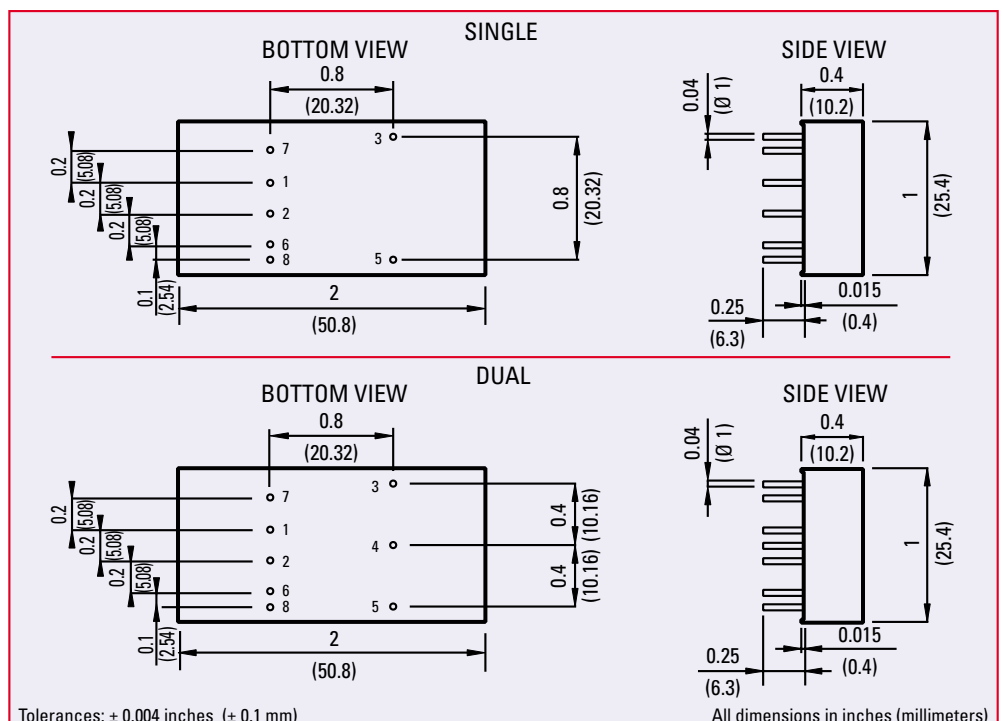
It is recommended to protect the input by fuses or other protection devices. Fuses are never supplied internally, and without them, severe damage or even fire can occur in the event of a module failure. A slow fuse with a rating of 2x the Iin max. is recommended.  
 All specifications are typical, 25°C ambient, with nominal input voltage and under full output load conditions, unless otherwise stated.  
 These converters operate without any external components. However, in low noise applications, it is recommended to use a low ESR capacitor across the output or the input pins.  
 Conducted noise filtering to EN 55022-B, VDE0871-B may be accomplished by putting an external filter. For more information, please consult factory.

## Pin connections

Pin	Single output
1	+ Input
2	- Input
3	+ Output
5	- Output
6*	Shutdown
7*	Synchro.
8*	Shutdown

Pin	Dual output
1	+ Input
2	- Input
3	+ Output
4	Common
5	- Output
6*	Shutdown
7*	Synchro.
8*	Shutdown

\*Pin 6 or 8 (low logic level shutdown) and 7 (synchro.) are available on request: add the suffix SD (pin 6) or SD2 (pin 8), and the suffix SY (pin 7) for synchro. option.



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