

# 500WFR series

## Single & Dual Output DC/DC Converter



### DESCRIPTIONS

The 500WFR series 5 watts power modules are high efficiency, low profile dc-dc converters that operate over a wide input voltage range of 4.5 - 9 VDC, 9 - 18 VDC, 18 - 36 VDC and 36 - 72 VDC and provide precisely regulated output voltages of 3.3V, 5V, 12V, 15V,  $\pm 5V$ ,  $\pm 12V$  and  $\pm 15V$ .

The  $-25^{\circ}\text{C}$  to  $+71^{\circ}\text{C}$  operating temperature range makes it ideal for data communication equipment, mobile battery driven equipment, distributed power systems, telecommunication equipment, mixed analog/digital subsystems, process/machine control equipment, computer peripheral systems and industrial robot systems.

### OUTPUT CHARACTERISTICS

	Min	Typ	Max	Unit/Comments
Output Voltage Accuracy			$\pm 2.0$	% Output voltage at nominal line & FL
Output Voltage Balance (Duals)		$\pm 0.5$	$\pm 2.0$	% Equal Output Loads
Line Regulation			$\pm 0.5$	% Output voltage measured from min. input line to maximum
Load Regulation		$\pm 0.5$	$\pm 1.0$	% Output voltage measured from FL to 25% load
Ripple			100	mV p-p, Nom.Line @FL, 20MHz B.W., (5Vout)
Ripple			1.0	% Vout (12Vout, 15Vout)
Short Circuit Protection				Continuous, Automatic Recovery
Transient Response Deviation		$\pm 3$		% deviation of Vout for a 25% load change
Over Power Protection	120			%
Transient Recovery Time		150	300	$\mu\text{S}$ for 25% load change
Temperature Coefficient		$\pm 0.01$	$\pm 0.02$	% per degree C

### FEATURES

- Up to 88% Efficiency
- Single & Dual Output, 4 to 6 watt converter
- 2 - 1 Input Range
- 500 VDC Input / Output Isolation
- Short Circuit Protection
- Industry Standard Pinout

### INPUT CHARACTERISTICS

	Min	Typ	Max	Unit/Comments
Start Voltage				
5 VDC Input Models	4.5	5	9	VDC
12 VDC Input Models	9	12	18	VDC
24 VDC Input Models	18	24	36	VDC
48 VDC Input Models	36	48	72	VDC
Input Fuse Requirements				
5 VDC Input Models		3000		mA; Slow blow type
12 VDC Input Models		1500		mA; Slow blow type
24 VDC Input Models		700		mA; Slow blow type
48 VDC Input Models		350		mA; Slow blow type
Reverse Polarity Input Current			1	A
Short Circuit Input Power		1000	3000	mW
Input Filter				Pi Filter

### GENERAL CHARACTERISTICS

	Min	Typ	Max	Unit/Comments
Switching Frequency		300		kHz
Isolation Voltage		500		VDC, 1 minute
Isolation Resistance		1000		Mohm, 500VDC