10 Watt CD Single Series DC/DC Converters

Features

- High Temperature Operation, up to 110°C Case with No Derating
- Fully Self Contained, No External Parts Required for Operation, Ultra Low Input Reflected Ripple
- Fixed Frequency Design
- Low and Specified Input/Output Capacitance
- Overcurrent Protected for Long, Reliable Operation
- Five-sided Shielding
- Water Washable Case Design
- Five Year Warranty

Description

The 24S5.2000CD DC/DC converter is designed for fast integration with your system's power needs. With no external components or filtering necessary for all but the most critical applications, these converters can provide power instantly. This saves you costly engineering time required to design your system around the power converter.

Input Parameters*

Model		24S5.2000CD	Units
Voltage Range	MIN MAX	18 36	VDC
Reflected Ripple (2)	TYP	20	mA P-P
Input Current Full Load No Load	TYP TYP	495 7	mA
Efficiency	TYP	84	%
Switching Frequency	TYP	220	kHz
Maximum Input Overvoltage, 100ms Maximum	MAX	45	VDC
Turn-on Time, 1% Output Error	TYP	6	ms
Recommended Fuse		(3)	AMPS

Selection Chart

Model	Input Range VDC		Output VDC	Output mA
	Min	Max		
24S5.2000CD	18	36	5	2000

Output Parameters*

Model		24S5.2000CD	Units
Output Voltage		5	VDC
Output Voltage Accuracy	MIN TYP MAX	4.90 5.00 5.10	VDC
Rated Load Range	MIN MAX	0.0 2.0	A
Load Regulation 25% Max Load - Max Load	TYP MAX	0.2 0.4	%
Line Regulation Vin = Min-Max VDC	TYP MAX	0.03 0.2	%
Short Term Stability (5)	TYP	< 0.05	%/24Hrs
Transient Response (6)	TYP	250	µs
Dynamic Response (7)	TYP	90	mV peak
Input Ripple Rejection (8)	TYP	> 40	dB
Noise, Peak - Peak (2)	TYP	70	mV P-P
Temperature Coefficient	TYP MAX	50 150	ppm/°C
Short Circuit Protection to Common		Continuous, Current Limit Protection	

NOTES

* **All parameters measured at Tc = 25°C, nominal input voltage and full rated load unless otherwise noted. Refer to the CALEX Application Notes for the definition of terms, measurement circuits and other information.**

(2) Noise is measured per CALEX Application Notes. Measurement bandwidth is 0-20 MHz for peak-peak measurements, 10 kHz to 1 MHz for RMS measurements. Output noise is measured with a 0.01µF / 100V ceramic capacitor in parallel with a 1µf / 35V Tantalum capacitor across output pins. Input reflected ripple is measured into a 10µH source impedance.

(3) To determine the correct fuse size, see CALEX Application Notes.

(4) The Case is tied to the -input pin.

(5) Short term stability is specified after a 30 minute warmup at full load, constant line and recording the drift over a 24 hour period.

(6) The transient response is specified as the time required to settle from a 50 to 75 % step load change (rise time of step = 2 µSec) to a 1% error band.

(7) Dynamic response is the peak overshoot during a transient as defined in note 6 above.

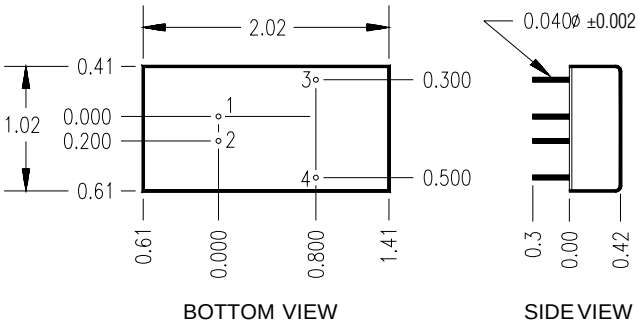
(8) The input ripple rejection is specified for DC to 120 Hz ripple with a modulation amplitude of 1% of Vin.

(9) The case thermal impedance is specified as the case temperature rise over ambient per package watt dissipated.

(10) Specifications subject to change without notice.

10 Watt CD Single Series DC/DC Converters

General Specifications*			
24S5.2000CD			**Units**
Isolation (4)			
Isolation Voltage Input to Output 10µA Leakage	MIN	700	VDC
Input to Output Capacitance	TYP	400	pF
Environmental			
Ambient Operating Range No Derating	MAX	85	°C
Case Operating Range No Derating	MIN MAX	-40 110	°C
Storage Range	MIN MAX	-55 120	°C
Thermal Impedance (9)	TYP	14	°C/Watt
General			
Unit Weight	TYP	1.0	oz
Chassis Mounting Kit		MS6, MS8, MS15	



BOTTOM VIEW SIDE VIEW

Mechanical tolerances unless otherwise noted:

X.XX dimensions: ±0.020 inches

X.XXX dimensions: ±0.005 inches

Pin	Function
1	+INPUT
2	-INPUT
3	+OUTPUT
4	CMN