

DC 800

S E R I E S

10 WATT 2:1 INPUT DC-DC CONVERTERS



(Replaces DC-1300 Series)

Features

- 10W Isolated Output
- Efficiency to 87%
- 2:1 Input Range
- Regulated Outputs
- Fixed Switching Frequency
- Input Under Voltage Protection
- Over Current Protection
- Remote ON/OFF
- Continuous Short Circuit Protection
- Conductive EMI Meets EN55022 Class A
- Without Tantalum Capacitors Inside
- CE Mark Meets 2004/108/EC
- Safety Meets UL60950-1, EN60950-1, and IEC60950-1

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT		INPUT CURRENT		% EFF.	Capacitor Load max.
			MIN.	MAX.	NO LOAD	FULL LOAD		
DC- 800	4.7-9 VDC	3.3 VDC	0 mA	2500 mA	120 mA	1988 mA	83	2470uF
DC- 801		5 VDC	0 mA	2000 mA	120 mA	2353 mA	85	2000uF
DC- 802		12 VDC	0 mA	833 mA	50 mA	2326 mA	87	940uF
DC- 803		15 VDC	0 mA	666 mA	50 mA	2326 mA	87	690uF
DC- 807		±5 VDC	0 mA	±1000 mA	50 mA	2381 mA	84	1000uF
DC- 808		±12 VDC	0 mA	±416 mA	50 mA	2326 mA	87	440uF
DC- 809		±15 VDC	0 mA	±333 mA	50 mA	2326 mA	87	330uF
DC- 810	9-18 VDC	3.3 VDC	0 mA	2500 mA	30 mA	838 mA	82	2470uF
DC- 811		5 VDC	0 mA	2000 mA	30 mA	980 mA	85	2000uF
DC- 812		12 VDC	0 mA	833 mA	30 mA	957 mA	87	940uF
DC- 813		15 VDC	0 mA	666 mA	35 mA	956 mA	87	690uF
DC- 817		±5 VDC	0 mA	±1000mA	45 mA	980mA	85	1000uF
DC- 818		±12 VDC	0 mA	±416mA	45 mA	957mA	87	440uF
DC- 819		±15 VDC	0 mA	±333mA	45 mA	957mA	87	330uF
DC- 820	18-36 VDC	3.3 VDC	0 mA	2500 mA	20 mA	419 mA	82	2470uF
DC- 821		5 VDC	0 mA	2000 mA	20 mA	490 mA	85	2000uF
DC- 822		12 VDC	0 mA	833 mA	20 mA	478 mA	87	940uF
DC- 823		15 VDC	0 mA	666 mA	20 mA	478 mA	87	690uF
DC- 827		±5 VDC	0 mA	±1000mA	30 mA	490 mA	85	1000uF
DC- 828		±12 VDC	0 mA	±416mA	25 mA	478 mA	87	440uF
DC- 829		±15 VDC	0 mA	±333mA	25 mA	478 mA	87	330uF
DC- 830	36-75 VDC	3.3 VDC	0 mA	2500 mA	20 mA	212 mA	81	2470uF
DC- 831		5 VDC	0 mA	2000 mA	20 mA	245 mA	85	2000uF
DC- 832		12 VDC	0 mA	833 mA	20 mA	239 mA	87	940uF
DC- 833		15 VDC	0 mA	666 mA	20 mA	239 mA	87	690uF
DC- 837		±5 VDC	0 mA	±1000mA	20 mA	245 mA	85	1000uF
DC- 838		±12 VDC	0 mA	±416mA	20 mA	239 mA	87	440uF
DC- 839		±15 VDC	0 mA	±333mA	20 mA	239 mA	87	330uF

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range.....	5V.....	4.7-9V
	12V.....	9-18V
	24V.....	18-36V
	48V.....	36-75V
Under voltage lockout	5Vin power up: 4.4V,	power down: 4.2V
	12Vin power up: 8.4V,	power down: 8V
	24Vin power up: 17V,	power down: 16V
	48Vin power up: 34V,	power down: 32V
Input Surge Voltage (100mS max.)	05S / 05D	12Vdc max.
	12S / 12D	25Vdc max.
	24S / 24D	50Vdc max.
	48S / 48D	100Vdc max.
Input Filter	Standard	PI Type
	SMD	LC Type
Positive Logic Remote on/off Control:		
Logic Compatibility	CMOS or Open Collector TTL	
Module ON	>+5.5V to 75VDC or Open Circuit	
Module OFF	<1.2VDC	

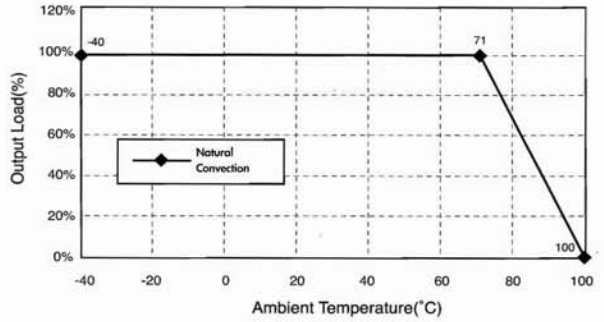
OUTPUT SPECIFICATIONS:

Voltage Accuracy	±1.5% max.	
Voltage Balance (Dual)	±2.0% max.	
Transient Response: 25% Step Load Change	<500µ sec.	
Ripple and Noise, 20MHz BW ³	50mV p-p max.	
	SMD	100mV p-p max.
Temperature Coefficient	±0.03%/°C max.	
Short Circuit Protection	Continuous	
Line Regulation ¹	Single.....DIP±0.2% max. ,SMD± 0.3% max.	
	Dual.....	± 0.5% max.
Load Regulation ²	Single.....DIP±0.2% max. ,SMD± 0.5% max.	
	Dual.....	± 1.0% max.
Cross Regulation (Dual output) Load cross variation 10%/100%	±5% max.	
Over Voltage Protection	Zener or TVS Clamp	
External Trim Adj. Range (single output models only)	±10%	
Current Limit	110% - 140% Nominal Output	
Start up time	20ms. max.	

GENERAL SPECIFICATIONS:

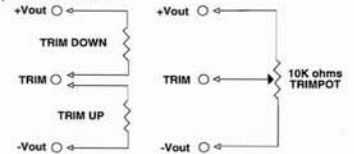
Efficiency	See Table
Isolation Voltage	1500 VDC min.
Isolation Resistance	10 ⁹ Ohms min.
Isolation Capacitance	1000pF typ.
Switching Frequency	350KHz typ.
EMI/RFI	(Standard)
	Conductive EMI Meets EN55022 Class A
Operating Ambient Temperature Range	-40°C to +85°C
Derating, Above 71°C	Linearly to Zero Power at +105°C
Case Temperature ⁴	105°C
Cooling	Natural Convection
Storage Temperature Range	-55°C to +125°C
Humidity	95% RH max. Non condensing
MTBF	MIL-STD-217-F, GB, 25°C, Full Load
	1200k hrs
Dimensions	Standard.....1.00x1.00x0.4 inches (25.4x25.4x10.2mm)
	SMD
	1.00x1.00x0.36 inches (25.4 x 25.4 x 9.2mm)
Case Material.....	Black Coated Copper with Non-Conductive Base
Weight	18.4g

DC-800 Series Derating Curve



External Output Trimming

Output may optionally be externally trimmed (±10%) with a fixed resistor or an external trimpot as shown.



NOTE:

1. Measured From High Line to Low Line
2. Measured From Full Load to min. Load
3. The output ripple and noise is measured with 10µF tantalum and 1µF ceramic capacitor across output.
4. Maximum case temperature under any operating condition should not be exceeded 105°C.
5. Suffix "S" to the Model Number with SMD packages.

PIN CONNECTION

Pin	DIP Function	
	Single	Dual
1	+Input	+Input
2	- Input	- Input
3	+V Output	+V Output
4	Trim	Common
5	-V Output	-V Output
6	Remote	Remote

SIZE

All Dimensions In Inches(mm)
Tolerance Inches: .xx=±0.4, .xxx=±0.10
Millimeters: .x=±1.0, .xx=±2.5

