

RDD08U SERIES



DC - DC CONVERTER

6.6 ~ 8.1W SINGLE & DUAL OUTPUT

FEATURES

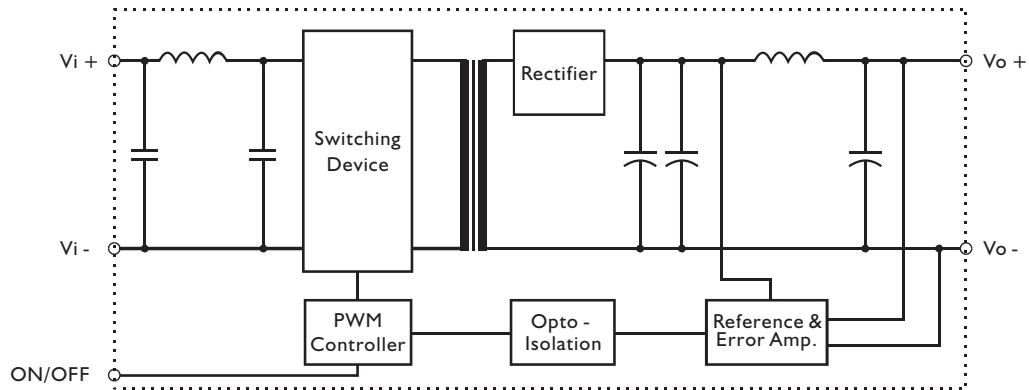
- LOW COST
- 2:1 WIDE INPUT RANGE
- I/O ISOLATION
- INPUT Pi FILTER
- SHORT CIRCUIT PROTECTION
- HIGH PERFORMANCE
- UL/cUL/TUV/CE

MODEL LIST

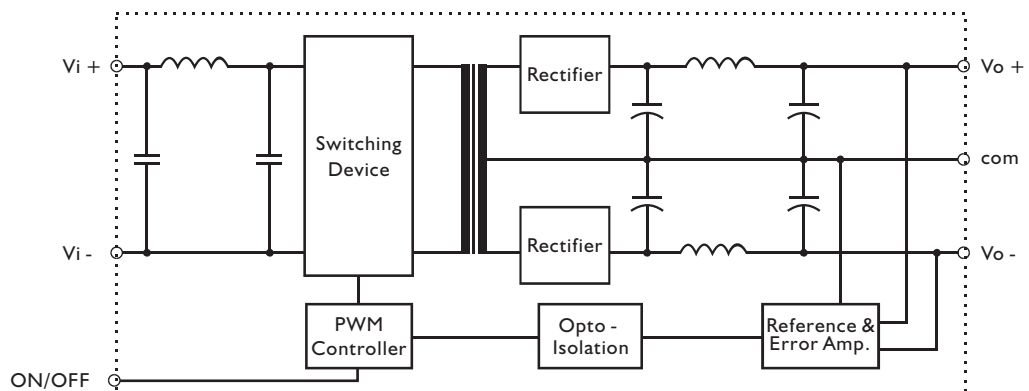
MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (TYP.)	EFF. (min.)
Single Output Models						
RDD08 - 03S1U	9~18 VDC	6.6 WATTS	+3.3 VDC	2000 mA	80%	78%
RDD08 - 05S1U	9~18 VDC	7.5 WATTS	+ 5 VDC	1500 mA	82%	80%
RDD08 - 12S1U	9~18 VDC	8 WATTS	+ 12 VDC	670 mA	85%	83%
RDD08 - 15S1U	9~18 VDC	8.1 WATTS	+ 15 VDC	540 mA	85%	83%
RDD08 - 03S2U	18~36 VDC	6.6 WATTS	+3.3 VDC	2000 mA	80%	78%
RDD08 - 05S2U	18~36 VDC	7.5 WATTS	+ 5 VDC	1500 mA	83%	81%
RDD08 - 12S2U	18~36 VDC	8 WATTS	+ 12 VDC	670 mA	85%	83%
RDD08 - 15S2U	18~36 VDC	8.1 WATTS	+ 15 VDC	540 mA	85%	83%
RDD08 - 03S3U	35~75 VDC	6.6 WATTS	+3.3 VDC	2000 mA	80%	78%
RDD08 - 05S3U	35~75 VDC	7.5 WATTS	+ 5 VDC	1500 mA	83%	81%
RDD08 - 12S3U	35~75 VDC	8 WATTS	+ 12 VDC	670 mA	85%	83%
RDD08 - 15S3U	35~75 VDC	8.1 WATTS	+ 15 VDC	540 mA	85%	83%
Dual Output Models						
RDD08 - 05D1U	9~18 VDC	8 WATTS	± 5 VDC	± 800 mA	82%	80%
RDD08 - 12D1U	9~18 VDC	8.1 WATTS	± 12 VDC	± 340 mA	85%	83%
RDD08 - 15D1U	9~18 VDC	8.1 WATTS	± 15 VDC	± 270 mA	85%	83%
RDD08 - 05D2U	18~36 VDC	8 WATTS	± 5 VDC	± 800 mA	83%	81%
RDD08 - 12D2U	18~36 VDC	8.1 WATTS	± 12 VDC	± 340 mA	85%	83%
RDD08 - 15D2U	18~36 VDC	8.1 WATTS	± 15 VDC	± 270 mA	85%	83%
RDD08 - 05D3U	35~75 VDC	8 WATTS	± 5 VDC	± 800 mA	83%	81%
RDD08 - 12D3U	35~75 VDC	8.1 WATTS	± 12 VDC	± 340 mA	85%	83%
RDD08 - 15D3U	35~75 VDC	8.1 WATTS	± 15 VDC	± 270 mA	85%	83%

CIRCUIT SCHEMATIC

- Block diagram for RDD08U series with single output



- Block diagram for RDD08U series with dual output



SPECIFICATION

All Specifications Typical At Nominal Line, Full Load, 25°C Unless Otherwise Noticed

GENERAL

Characteristics	Conditions	min.	typ.	max.	unit
Switching frequency	Vi nom, Io nom		280		KHz
Isolation voltage	Input / Output	1,500			VDC
Isolation resistance	Input / Output, @ 500VDC	1G			Ω
Ambient temperature	Operating at Vi nom, Io nom	-40		+ 71	°C
Case temperature	Operating at Vi nom, Io nom			+ 100	°C
Derating	Vi nom	See derating curve			% / °C
Storage temperature	Non operational	-40		+ 100	°C
Dimension	L20.3 x W31.8 x H10.2				mm
Cooling	Free air convection				
Case material	Tinplate nickel plated				

INPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit
Input voltage range	Ta min ... Ta max, Io nom	9	12	18	VDC
		18	24	36	VDC
		35	48	75	VDC
No load input current	Vi nom, Io = 0	12V models	30		mA
		24V models	25		mA
		48V models	20		mA
Input voltage w/o damage	Io nom	12V models		20	VDC
		24V models		40	VDC
		48V models		80	VDC
startup voltage	Io nom	12V models	8.7		VDC
		24V models	17.4		VDC
		48V models	31.5		VDC
Input filter	Pi type				

OUTPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit
Output voltage accuracy	Vi nom, Io nom			± 2	%
Minimum load	Vi nom single output models	0			%
	Vi nom dual output models (each output)	10			%
Line regulation	Io nom, Vi min ... Vi max			± 0.5	%
Load regulation	Vi nom, Io 0 ... Io nom, single output models			± 0.5	%
	Vi nom, Io min ... Io nom, dual output models			± 1	%
Transient recovery time	Vi nom, Io nom = I ↔ 1/2 Io nom		1		ms
Temperature coefficient	Vi nom, Io nom			± 0.02	% / °C
Ripple & noise	Vi nom, Io nom, BW = 20MHz			50	mV
Efficiency	Vi nom, Io nom, Po / Pi	Up to 85%, See model list			
Capacitive Load	Io nom	3.3Vout models		3300	μ F
		5.0Vout models		2200	
		12.0Vout models		470	
		15.0Vout models		330	
		± 5Vout models		± 1000	
		± 12Vout models		± 180	
		± 15Vout models		± 100	

CONTROL AND PROTECTION

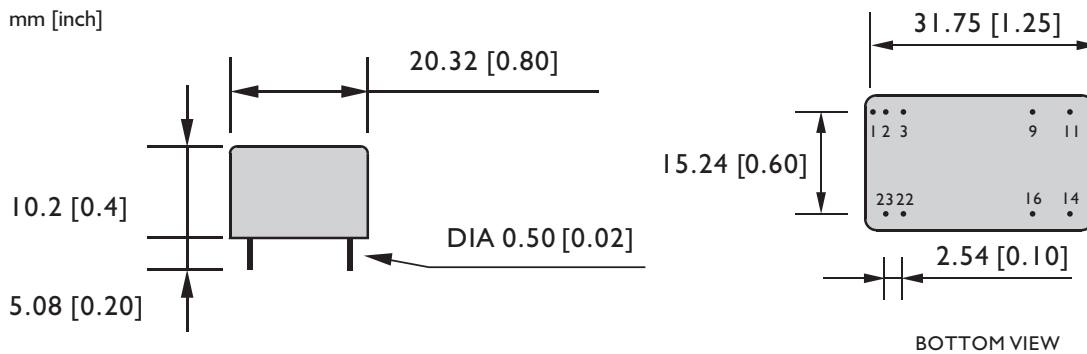
Input reversed	Shunt diode built in, external fuse recommended	
Output short circuit	Continuous	
Rated over load protection	110%min....140%max	
Remote on/off control	ON : 3....10Vdc or open circuit	OFF: 0....1.5Vdc or short circuit pin1 and pin2,3

APPROVALS AND STANDARD

UL/cUL	UL60950-1
TUV	EN60950-1
CE	EN61204-3(Class A for EMI)

MECHANISM & PIN CONFIGURATION

mm [inch]

**PHYSICAL CHARACTERISTICS**

CASE SIZE	20.3 x 31.8 x 10.2 mm 0.8 x 1.25 x 0.4 inches
CASE MATERIAL	Tinplate nickel plated
WEIGHT	16 g

PIN ASSIGNMENT**GENERAL**

PIN NO.	1	2 & 3	9	11	14	16	22 & 23
SINGLE	Remote On/Off	Vi -	N. C.	N. C.	Vo+	Vo -	Vi+
DUAL	Remote On/Off	Vi -	com	Vo -	Vo+	com	Vi+

DERATING