

PART NUMBER: VDZ200 series

DESCRIPTION: dc-dc converter

features

- input PI filter
- high density
- 2:1, 4:1 input range
- high reliability
- easy installation
- rugged
- compact
- low profile
- six side metal shielding
- low EMI interference
- perfectly suited for: transportation, base station, telecom, and test equipment



model number ^{1,2}	nominal input	input range	output voltage	output current	output power	ripple & noise	typical efficiency
VDZ200-D12-S12	12	9-18 Vdc	12V	6.25 A	75W	120 (mVpp)	83%
VDZ200-D12-S15	12	9-18 Vdc	15V	5.0 A	75W	150 (mVpp)	83%
VDZ200-D12-S24	12	9-18 Vdc	24V	4.16 A	100W	200 (mVpp)	83%
VDZ200-D12-S28	12	9-18 Vdc	28V	4.46 A	125W	280 (mVpp)	84%
VDZ200-D12-S48	12	9-18 Vdc	48V	2.6 A	125W	400 (mVpp)	84%
VDZ200-D24-S12	24	18-36 Vdc	12V	6.25 A	75W	120 (mVpp)	85%
VDZ200-D24-S15	24	18-36 Vdc	15V	5.0 A	75W	120 (mVpp)	85%
VDZ200-D24-S24	24	18-36 Vdc	24V	4.16 A	100W	200 (mVpp)	88%
VDZ200-D24-S28	24	18-36 Vdc	28V	4.46 A	125W	280 (mVpp)	88%
VDZ200-D24-S48	24	18-36 Vdc	48V	3.13 A	150W	400 (mVpp)	89%
VDZ200-D48-S12	48	36-72 Vdc	12V	10.4 A	125W	120 (mVpp)	88%
VDZ200-D48-S15	48	36-72 Vdc	15V	8.33A	125W	120 (mVpp)	88%
VDZ200-D48-S24	48	36-72 Vdc	24V	5.2 A	125W	200 (mVpp)	89%
VDZ200-D48-S28	48	36-72 Vdc	28V	4.46 A	125W	280 (mVpp)	89%
VDZ200-D48-S48	48	36-72 Vdc	48V	3.125 A	150W	400 (mVpp)	88%
VDZ200-Q24-S12	18	9-36 Vdc	12V	6.25 A	75W	120 (mVpp)	83%
VDZ200-Q24-S15	18	9-36 Vdc	15V	5.0 A	75W	150 (mVpp)	83%
VDZ200-Q24-S24	18	9-36 Vdc	24V	5.0 A	120W	200 (mVpp)	85%
VDZ200-Q24-S28	18	9-36 Vdc	28V	4.29 A	120W	280 (mVpp)	85%
VDZ200-Q24-S48	18	9-36 Vdc	48V	2.5 A	120W	480 (mVpp)	84%
VDZ200-Q48-S12	48	18-72 Vdc	12V	6.25 A	75W	120 (mVpp)	84%
VDZ200-Q48-S15	48	18-72 Vdc	15V	5.0 A	75W	150 (mVpp)	84%
VDZ200-Q48-S24	48	18-72 Vdc	24V	5.0 A	120W	200 (mVpp)	84%
VDZ200-Q48-S28	48	18-72 Vdc	28V	4.29 A	120W	280 (mVpp)	84%
VDZ200-Q48-S48	48	18-72 Vdc	48V	3.125 A	150W	400 (mVpp)	83%

NOTES:

1. suffix "M" for -40~85°C operating temperature range.
2. suffix "MM" for -55~85°C operating temperature range.

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INPUT

specification	typical	range	units
input voltage range	12V	9~18	Vdc
	24V	18~36	Vdc
	48V	36~72	Vdc
	18V	9~36	Vdc
	48V	18-72	Vdc
input reversal protection	protected if an external input fuse is installed.		

OUTPUT

specification	min.	typ.	max.	units
voltage accuracy			±1%	
trim adjustment		±10%		
ripple and noise(@ 20MHz bandwidth)			<1%	mVpp
line regulation			±0.2%	
load regulation			±0.4%	
temperature coefficient			±0.01	%/°C
transient response (25%-50%-25% & 50%-75%-50%)			200	µs

GENERAL SPECIFICATIONS

specification	min.	typ.	max.	units
switching frequency	160K	180K	200K	Hz
isolation resistance	200M			Ω
MTBF	200K			hours
isolation voltage	input-output	1000		Vdc
	input-case	1000		Vdc
	output-case	1000		Vdc

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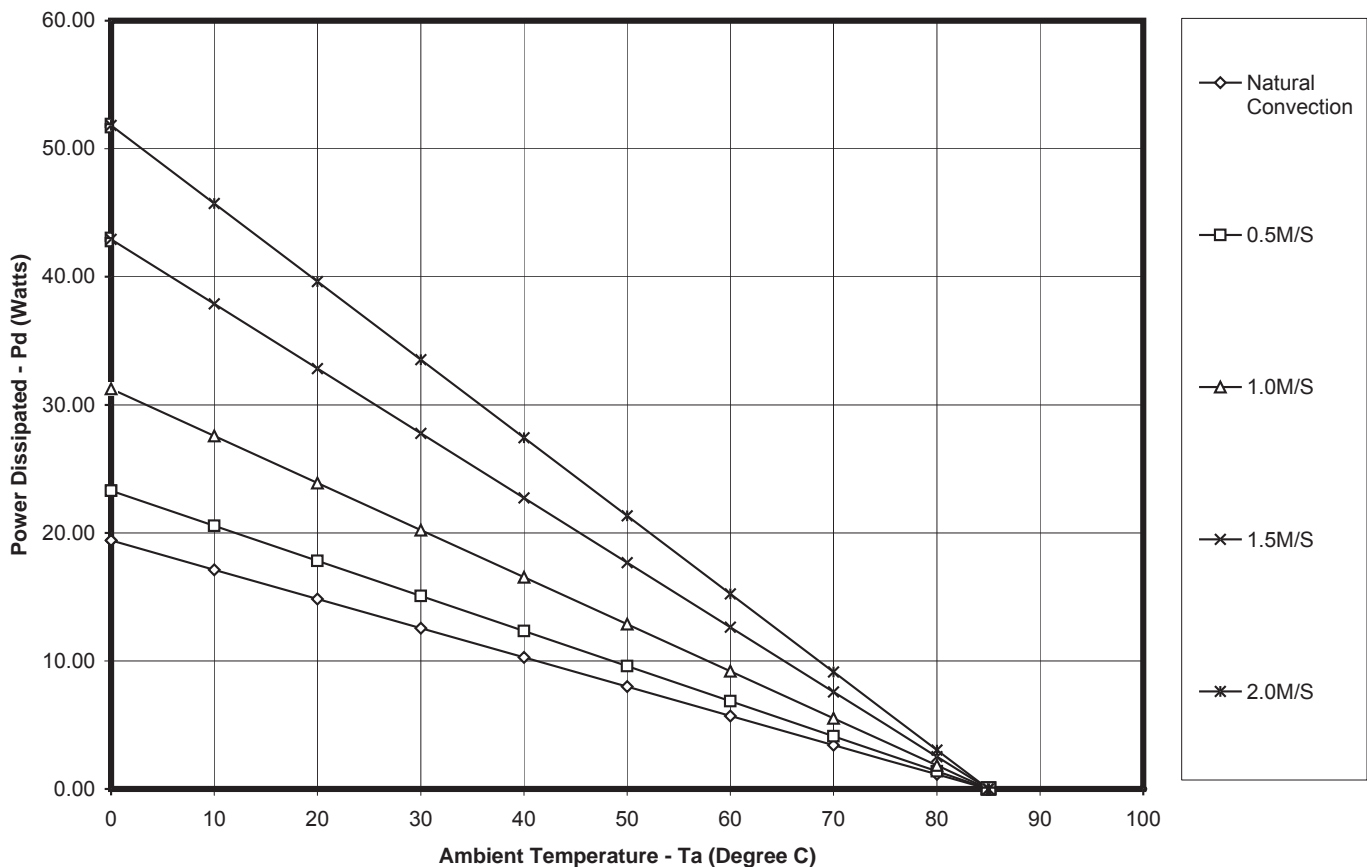
DESCRIPTION: dc-dc converter

ENVIRONMENTAL SPECIFICATIONS

specification		min.	typ.	max.	units
case temperature	(industrial grade)	-25		+85	°C
	(military grade I)	-40		+85	°C
	(military grade II)	-55		+85	°C
storage temperature	(industrial grade)	-45		+105	°C
	(military grade)	-55		+105	°C
case humidity	(non-condensing)	5%		85%	RH
storage humidity	(non-condensing)	5%		95%	RH

THERMAL CHARACTERISTICS

cooling method	thermal impedance	
natural convection	4.38°C/W	
0.5 (M/S)	1.64 (LF/S)	3.65°C/W
1.0 (M/S)	3.28 (LF/S)	2.72°C/W
1.5 (M/S)	4.92 (LF/S)	1.98°C/W
2.0 (M/S)	6.56 (LF/S)	1.64°C/W

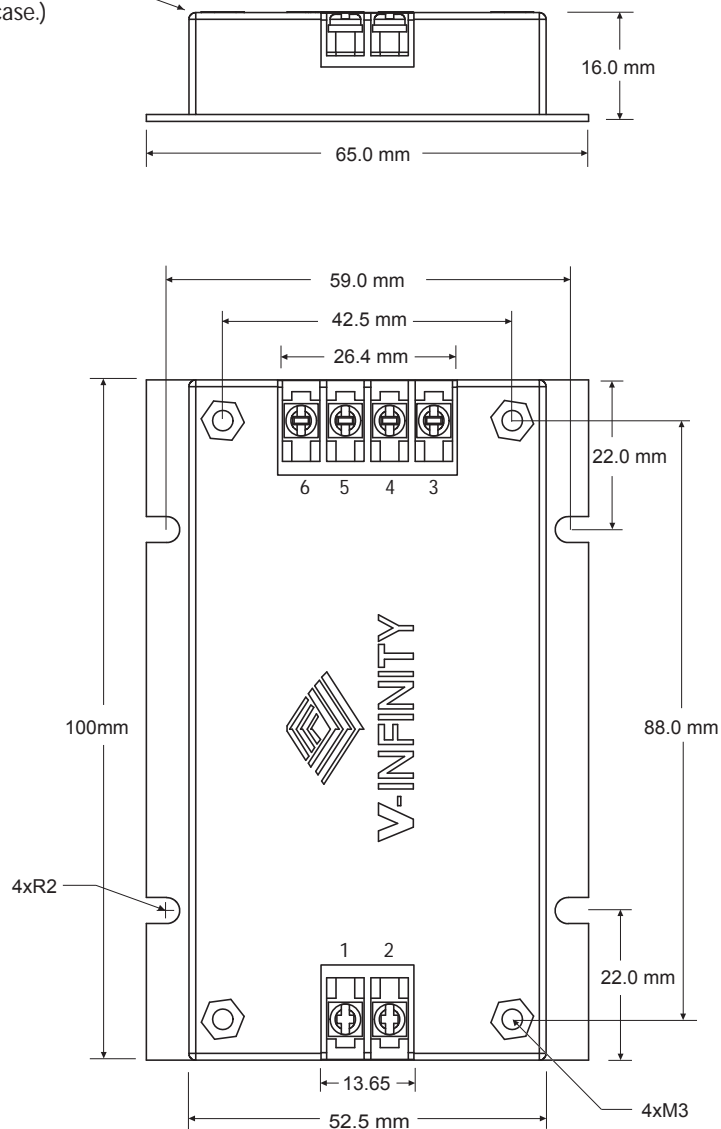
Power Dissipated vs Ambient Temperature and Air Flow


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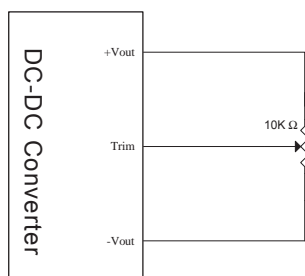
DIMENSIONS (mm)

(Most heat to be dissipated from the top of case.)



Pin	Function
1	+Vin
2	-Vin
3	-Vout
4	-Vout
5	+Vout
6	Trim

TRIM DIAGRAM (mm)



suggested values

Vout	12V	15V	24V	28V	48V
Potentiometer	20K	33K	47K	47K	100K