

**PART NUMBER:** VAWQ3 series

**DESCRIPTION:** DC-DC converter

**features**

- 3W isolated output
- efficiency to 80%
- 24-pin DIP package
- 4:1 input range
- regulated outputs
- continuous short circuit protection
- Pi input filter
- high isolation voltage



model number <sup>1, 2, 3</sup>	input voltage	output voltage	output current	input current		efficiency
				no load	full load	
VAWQ3-Q24-S3R3	9-36VDC	3.3VDC	600mA	15mA	117mA	70%
VAWQ3-Q24-S5	9-36VDC	5VDC	600mA	15mA	174mA	72%
VAWQ3-Q24-S12	9-36VDC	12VDC	250mA	15mA	165mA	76%
VAWQ3-Q24-S15	9-36VDC	15VDC	200mA	15mA	165mA	76%
VAWQ3-Q24-D5	9-36VDC	±5VDC	±300mA	25mA	179mA	70%
VAWQ3-Q24-D12	9-36VDC	±12VDC	±125mA	25mA	174mA	72%
VAWQ3-Q24-D15	9-36VDC	±15VDC	±100mA	25mA	174mA	72%
VAWQ3-Q48-S3R3	18-72VDC	3.3VDC	600mA	7.5mA	58mA	70%
VAWQ3-Q48-S5	18-72VDC	5VDC	600mA	7.5mA	87mA	72%
VAWQ3-Q48-S12	18-72VDC	12VDC	250mA	7.5mA	78mA	80%
VAWQ3-Q48-S15	18-72VDC	15VDC	200mA	7.5mA	78mA	80%
VAWQ3-Q48-D5	18-72VDC	±5VDC	±300mA	12mA	88mA	71%
VAWQ3-Q48-D12	18-72VDC	±12VDC	±125mA	12mA	87mA	72%
VAWQ3-Q48-D15	18-72VDC	±15VDC	±100mA	12mA	87mA	72%

**NOTES:**

1. suffix "HM" for 1.5K Vdc isolation
2. suffix "H" for 3K Vdc isolation
3. suffix "-SMT" for SMT case style

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## INPUT

input voltage range	24V 9-36V 48V 18-72V
input filter	PI type

## OUTPUT

voltage accuracy	±2.0% max.
voltage balance (dual)	±1.0% max
ripple & noise 20MHz BW, Single & ±5V	100mV p-p, max.
dual	1% p-p max.
temperature coefficient	±0.05%/°C
short circuit protection	continuous
line regulation <sup>1</sup> single/dual	±0.5% max
load regulation single <sup>2</sup>	±0.5% max
load regulation <sup>2</sup> dual	±1% max

## GENERAL SPECIFICATIONS

efficiency	see table
isolation resistance	10 <sup>9</sup> Ohm
switching frequency	100KHz, min.
operating temperature range	-25°C to +71°C
case temperature (plastic case)	95°C
(copper case)	100°C
cooling	free-air convection
storage temperature range	-40°C to +100°C
dimensions	1.25x0.8x0.4 inches (31.8x20.3x10.2mm)

## ISOLATION VOLTAGE

500 VDC min.	standard models
1.5K VDC min.	suffix "HM" models
3K VDC min	suffix "H" models

## CASE MATERIAL

standard Models	non conductive black plastic
suffix "M" models	black coated copper with non-
conductive base	

### NOTES:

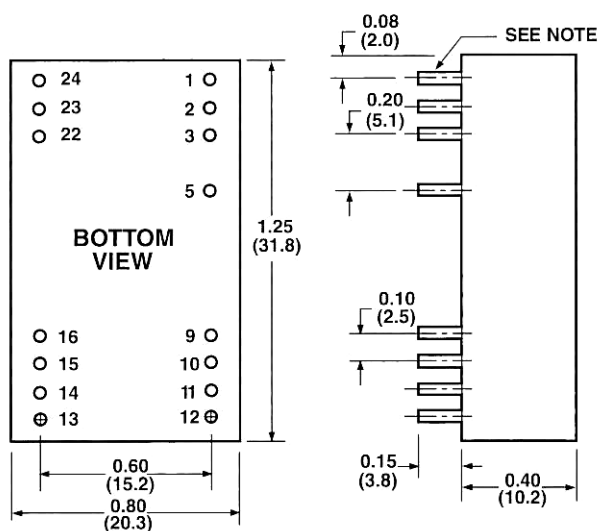
1. measured from high line to low line
2. measured from full load to 10% load
3. measured from full load to 1/4 load
4. non-conductive black plastic only

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## DIMENSIONS (mm)

NOTE: Pin Size is 0.02" Inch (0.5mm) DIA  
 All Dimensions In Inches(mm)  
 Tolerance .xx= ±.02, .xxx= ±.010



### PIN CONNECTION

Pin	500 VDC		Pin	1.5K & 3K VDC	
	Single Output	Dual Output		Single Output	Dual Output
1	+V Input	+V Input	1	NP	NP
2	NC	-V Output	2	-V Input	-V Input
3	NC	Common	3	-V Input	-V Input
5	NP	NP	5	NP	NP
9	NP	NP	9	NC	Common
10	-V Output	Common	10	NC	NC
11	+V Output	+V Output	11	NC	-V Output
12	-V Input	-V Input	12	NP	NP
13	-V Input	-V Input	13	NP	NP
14	+V Output	+V Output	14	+V Output	+V Output
15	-V Output	Common	15	NC	NC
16	NP	NP	16	-V Output	Common
22	NC	Common	22	+V Input	+V Input
23	NC	-V Output	23	+V Input	+V Input
24	+V Input	+V Input	24	NP	NP

\*NP-NO PIN

\*NC-NO CONNECTION WITH PIN

## DERATING CURVE

