

**PART NUMBER:** VAWQ6

**DESCRIPTION:** dc-dc converter

**features**

- 5-6W isolated output
- efficiency to 80%
- 24-Pin DIP package
- 4:1 input range
- regulated outputs
- continuous short circuit protection
- Pi input filter



model number	input voltage	output voltage	output current	input current		efficiency
				no load	full load	
VAWQ6-Q24-S3R3	9-36VDC	3.3VDC	1000mA	15mA	191mA	72%
VAWQ6-Q24-S5	9-36VDC	5VDC	1000mA	15mA	267mA	78%
VAWQ6-Q24-S12	9-36VDC	12VDC	470mA	15mA	294mA	80%
VAWQ6-Q24-S15	9-36VDC	15VDC	400mA	15mA	313mA	80%
VAWQ6-Q24-D5	9-36VDC	±5VDC	±500mA	25mA	288mA	80%
VAWQ6-Q24-D12	9-36VDC	±12VDC	±230mA	25mA	297mA	80%
VAWQ6-Q24-D15	9-36VDC	±15VDC	±190mA	25mA	267mA	78%
VAWQ6-Q48-S3R3	18-72VDC	3.3VDC	1000mA	7.5mA	100mA	70%
VAWQ6-Q48-S5	18-72VDC	5VDC	1000mA	7.5mA	134mA	78%
VAWQ6-Q48-S12	18-72VDC	12VDC	470mA	7.5mA	149mA	79%
VAWQ6-Q48-S15	18-72VDC	15VDC	400mA	7.5mA	157mA	80%
VAWQ6-Q48-D5	18-72VDC	±5VDC	±500mA	12mA	146mA	79%
VAWQ6-Q48-D12	18-72VDC	±12VDC	±230mA	12mA	149mA	80%
VAWQ6-Q48-D15	18-72VDC	±15VDC	±190mA	12mA	135mA	77%

**NOTES:**

1. suffix "HM" for black coated copper with non-conductive base case material
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	3.3V/5V 12V/15V	100mV p-p, max. 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 <sup>2</sup>	single <sup>2</sup> dual <sup>3</sup>	±0.5% max ±1% max	

## GENERAL SPECIFICATIONS

efficiency	see table	
isolation resistance	10 <sup>9</sup> Ohm	
switching frequency	200KHz, 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

1.5 k V dc min.	standard or suffix "HM" models
3 k V dc min.	suffix "H" models

## CASE MATERIAL

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

## NOTES:

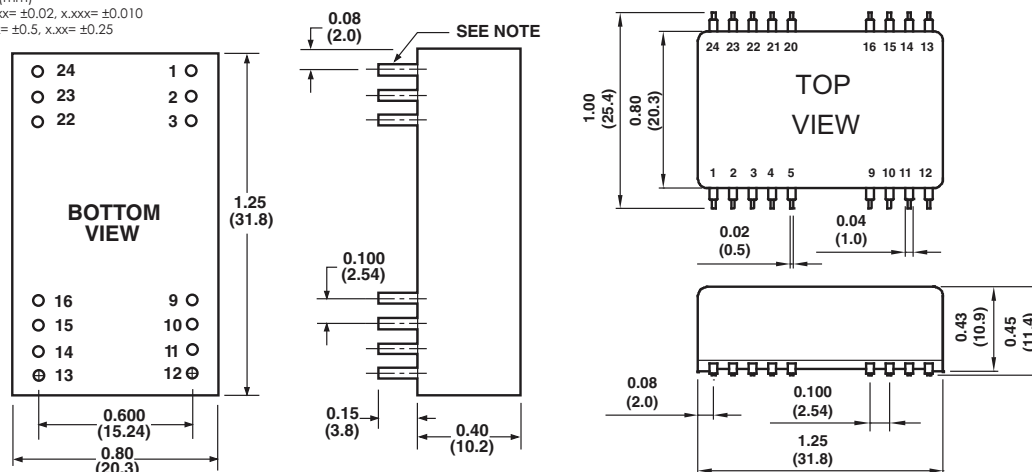
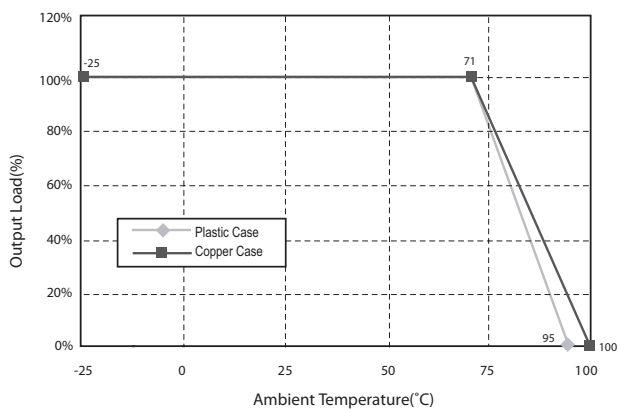
1. Measured from high line to low line
2. Measured from full load to 10% load
3. Measured from full load to 1/4 load
4. Non-conductive black plastic only

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**DIMENSIONS (mm)**

NOTE: Pin Size is 0.02" Inch (0.5mm) DIA  
 All Dimensions In Inches(mm)  
 Tolerance Inches: x.xx= ±0.02, x.xxx= ±0.010  
 Millimeters: x.x= ±0.5, x.xx= ±0.25


**DERATING CURVE**

**PIN CONNECTIONS**

Pin	Single Output		Dual Output	
	DIP	SMD	DIP	SMD
1, 24	NP	NC	NP	NC
2, 3	-V Input		-V Input	
4, 5	NP	NC	NP	NC
9	NC		Common	
10, 15	NC		NC	
11	NC		-V Output	
12, 13	NP	NC	NP	NC
14	+V Output		+V Output	
16	-V Output NC		Common	
20, 21	NP	NC	NP	NC
22, 23	+V Input		+V Input	

\*NP-NO PIN

\*NC-NO CONNECTION WITH PIN