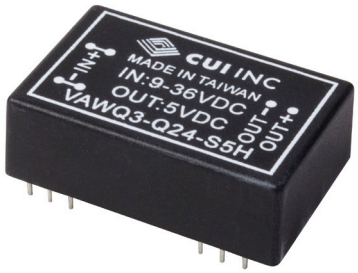
CUI INC
a bel group

SERIES: VAWQ3 | DESCRIPTION: DC-DC CONVERTER

FEATURES

- up to 3 W isolated output
- wide input (4:1)
- industry standard 24 pin DIP package style
- single and dual regulated outputs
- 3,000 V isolation (H version)
- short circuit protection
- wide temperature (-25~71°C)
- efficiency up to 77%

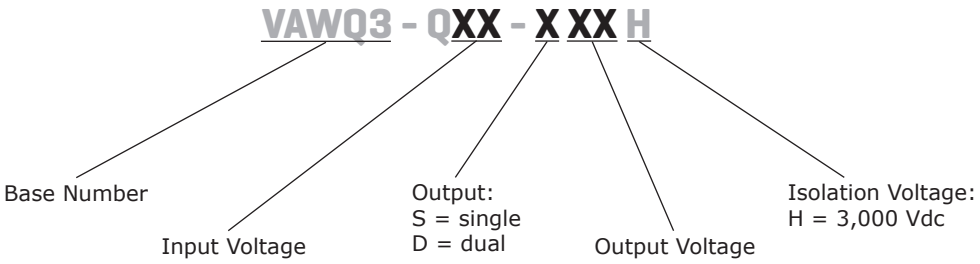


RoHS

MODEL

MODEL	input voltage range (Vdc)	output voltage (Vdc)	output current max (mA)	output power max (W)	ripple and noise max (mVp-p)	efficiency typ (%)
VAWQ3-Q24-S3R3	9~36	3.3	600	2	100	70
VAWQ3-Q24-S5	9~36	5	600	3	100	72
VAWQ3-Q24-S12	9~36	12	250	3	100	76
VAWQ3-Q24-S15	9~36	15	200	3	100	76
VAWQ3-Q24-D5	9~36	±5	±300	3	100	70
VAWQ3-Q24-D12	9~36	±12	±125	3	120	72
VAWQ3-Q24-D15	9~36	±15	±100	3	150	72
VAWQ3-Q48-S3R3	18~72	3.3	600	2	100	70
VAWQ3-Q48-S5	18~72	5	600	3	100	72
VAWQ3-Q48-S12	18~72	12	250	3	100	77
VAWQ3-Q48-S15	18~72	15	200	3	100	77
VAWQ3-Q48-D5	18~72	±5	±300	3	100	71
VAWQ3-Q48-D12	18~72	±12	±125	3	120	72
VAWQ3-Q48-D15	18~72	±15	±100	3	150	72

PART NUMBER KEY



INPUT

parameter	conditions/description	min	typ	max	units
operating input voltage		9 18	24 48	36 72	Vdc Vdc
input filter	PI type				

OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation	measured from low line to high line			±0.5	%
load regulation	single output models[1] dual output models[2]			±0.5 ±1.0	% %
voltage accuracy				±2.0	%
voltage balance	dual output models			±1.0	%
switching frequency		100			kHz
temperature coefficient				±0.05	%/°C

Notes: 1. measured from 10% to 100% full load
2. measured from 25% to 100% full load

PROTECTIONS

parameter	conditions/description	min	typ	max	units
short circuit protection	continuous				

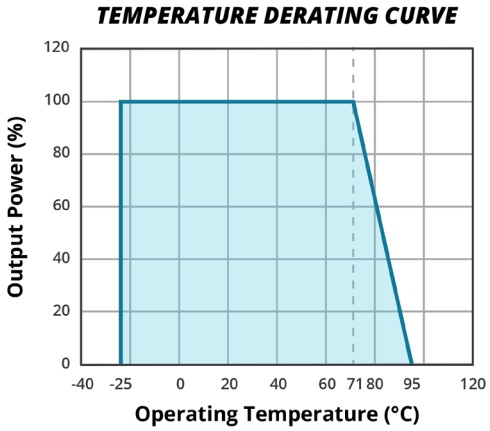
SAFETY AND COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage		3,000			Vdc
insulation resistance		1,000			MΩ
RoHS compliant	yes				

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature		-25		71	°C
case temperature				95	°C
storage temperature		-40		100	°C

DERATING CURVES

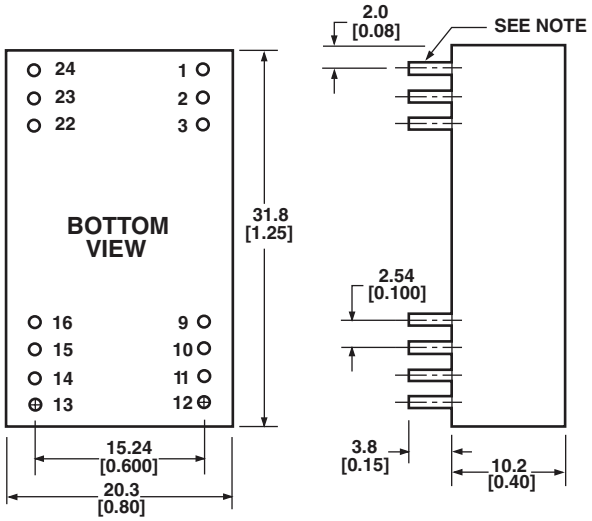


MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	1.25 x 0.80 x 0.40 (31.8 x 20.3 x 10.2 mm)				inch
case material	non-conductive black plastic				
weight			12.5		g

MECHANICAL DRAWING

units: mm [inches]
tolerance: inches: x.xx = ±0.02, x.xxx = ±0.010
mm: x.xx = ±0.5, x.xxx = ±0.25
Note: Pin diameter 0.02 inch (0.5 mm)



PIN CONNECTIONS		
	SINGLE OUTPUT	DUAL OUTPUT
PIN	FUNCTION	FUNCTION
1,24	NP	NP
2,3	-Vin	-Vin
4,5	NP	NP
9	NC	Common
10,15	NC	NC
11	NC	-Vo
12,13	NP	NP
14	+Vo	+Vo
16	-Vo	Common
20,21	NP	NP
22,23	+Vin	+Vin

NP = No Pin
NC = No connection

Note: All specifications measured at 25°C, nominal input voltage, and full load unless otherwise noted.

REVISION HISTORY

rev.	description	date
1.0	initial release	04/06/2009
1.01	updated to new template	06/06/2012
1.02	V-Infinity branding removed	09/11/2012
1.03	updated spec	03/12/2013
1.04	company logo updated	02/16/2021
1.05	derating curve updated	07/20/2021

The revision history provided is for informational purposes only and is believed to be accurate.

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CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

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CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.