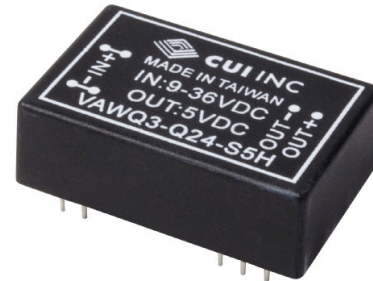




SERIES: VAWQ3 | **DESCRIPTION:** DC-DC CONVERTER

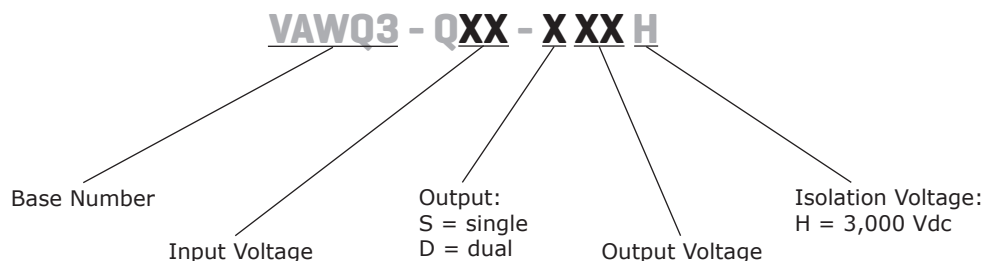
FEATURES

- 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%



| 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 |
| 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 | | | | |

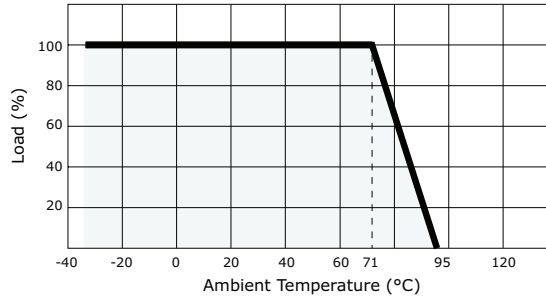
SAFETY AND COMPLIANCE

| 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

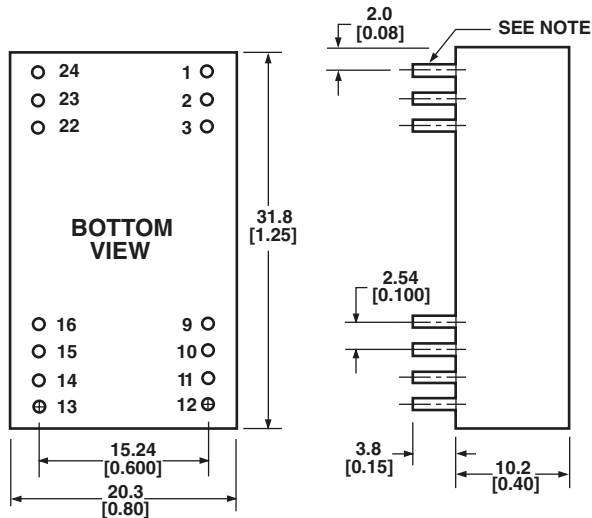


MECHANICAL

| 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 |

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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