

DC/DC Converter – VK-S/D1

1.5 WATT
Single / Dual Output

FEATURES

- 1500 Vdc Isolation (3500 Vdc Isolation available)
- Wide 4:1 Input Range
- 24 Pin DIL Package
- Regulated
- Continuous Short Circuit Protection
- Nickel-Coated Copper Metal
- MTBF > 1.05MHours

Model Number	Input Vdc	Output Vdc	Output Current (mA)	Efficiency @FL (%)
VK-243R3S1	9-36	3.3	400	72
VK-2405S1		5	300	76
VK-2409S1		9	167	76
VK-2412S1		12	125	77
VK-2415S1		15	100	77
VK-2418S1		18	84	76
VK-2424S1		24	63	76
VK-243R3D1	9-36	±3.3	±200	72
VK-2405D1		±5	±150	75
VK-2409D1		±9	±84	77
VK-2412D1		±12	±63	76
VK-2415D1		±15	±50	78
VK-2418D1		±18	±42	77
VK-2424D1		±24	±32	76
VK-483R3S1	18-72	3.3	400	72
VK-4805S1		5	300	74
VK-4809S1		9	167	75
VK-4812S1		12	125	75
VK-4815S1		15	100	75
VK-4818S1		18	84	75
VK-4824S1		24	63	76
VK-483R3D1	18-72	±3.3	±200	73
VK-4805D1		±5	±150	75
VK-4809D1		±9	±84	75
VK-4812D1		±12	±63	75
VK-4815D1		±15	±50	76
VK-4818D1		±18	±42	76
VK-4824D1		±24	±32	76

1. Suffix " P " Plastic Instead of Metal case Package.
2. Input Voltage range is from 9 V to 72 V and Output Voltage is from 3.3 V to 24 V.

Input Specifications:

Voltage Range 24Vdc, 09-36 Vdc
48Vdc, 18-72 Vdc
Filter π (Pi) Network

Isolation Specification:

Rated Voltage 1500 Vdc, Standard
Resistance 1000M Ω Min.
Capacitance 390 pF, Typ.

Output Specifications:

Voltage Accuracy: $\pm 1\%$, Max.
Voltage Balance (Dual Outputs) $\pm 1\%$
Ripple and Noise (at 20 MHz BW) (\pm) 60mVp-p, Max
Short Circuit Protection Continuous
Short Circuit Restart Automatic
Line Voltage Regulation $\pm 0.5\%$, Max.
Load Voltage Regulation $\pm 0.5\%$, Max.
Temperature Coefficient $\pm 0.02\% / ^\circ\text{C}$

General Specifications:

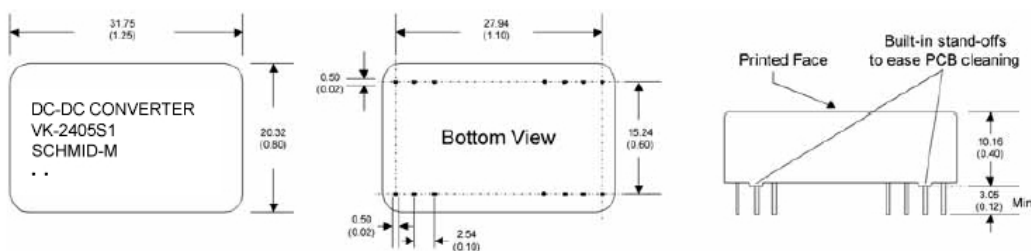
Efficiency 72% ~ 78%
Switching Frequency 260 KHz, Typ.

Environmental Specification:

Operating Temperature (Ambient) $-40^\circ\text{C} \sim +85^\circ\text{C}$
Case Temperature 100°C Max.
Storage Temperature $-40^\circ\text{C} \sim +125^\circ\text{C}$
Derating None Required
Humidity Up to 90%, Non-condensing
Cooling Free-air Convection

MECHANICAL DIMENSIONS & PIN CONNECTIONS

24 Pin DIL package



Pin #	STANDARD	
	Single	Dual
2	-V Input	-V Input
3	-V Input	-V Input
9	Omitted	Common
11	N.C	-V Output
14	+V Output	+V Output
16	-V Output	Common
22	+V Input	+V Input
23	+V Input	+V Input

- Notes: 1. All dimensions are typical in millimeters (inches). Tolerance x.xx = ± 0.25 (± 0.01)
2. Plastic Case Dimensions are 31.75 * 20.32 * 10.16 mm.

DC/DC Converter – VK-S/D4

4 WATT

Single / Dual Output

FEATURES

- 1500 Vdc Isolation (3500 Vdc Isolation available)
- Wide 4:1 Input Range
- 24 Pin DIL Package
- Regulated
- Continuous Short Circuit Protection
- Nickel-Coated Copper Metal
- MTBF > 1.05MHours

Model Number	Input Vdc	Output Vdc	Output Current (mA)	Efficiency @FL (%)
VK-243R3S4	9-36	3.3	1200	77
VK-2405S4		5	800	80
VK-2409S4		9	445	80
VK-2412S4		12	333	83
VK-2415S4		15	267	83
VK-2418S4		18	223	80
VK-2424S4		24	167	81
VK-243R3D4	9-36	±3.3	±600	76
VK-2405D4		±5	±400	78
VK-2409D4		±9	±223	80
VK-2412D4		±12	±167	82
VK-2415D4		±15	±134	80
VK-2418D4		±18	±112	80
VK-2424D4		±24	±84	80
VK-483R3S4	18-72	3.3	1200	77
VK-4805S4		5	800	80
VK-4809S4		9	445	82
VK-4812S4		12	333	81
VK-4815S4		15	267	81
VK-4818S4		18	223	81
VK-4824S4		24	167	82
VK-483R3D4	18-72	±3.3	±600	75
VK-4805D4		±5	±400	79
VK-4809D4		±9	±223	81
VK-4812D4		±12	±167	82
VK-4815D4		±15	±134	81
VK-4818D4		±18	±112	80
VK-4824D4		±24	±84	80

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Short Circuit Protection Continuous
Short Circuit Restart Automatic
Line Voltage Regulation $\pm 0.5\%$, Max.
Load Voltage Regulation $\pm 0.5\%$, Max.
Temperature Coefficient $\pm 0.02\%$ / $^{\circ}\text{C}$

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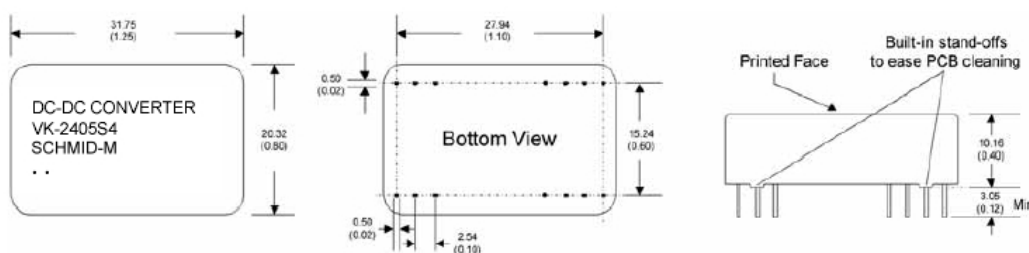
Efficiency 76% ~ 83%
Switching Frequency 260 KHz, Typ.

Environmental Specification:

Operating Temperature (Ambient) $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Case Temperature 100°C Max.
Storage Temperature $-40^{\circ}\text{C} \sim +125^{\circ}\text{C}$
Derating None Required
Humidity Up to 90%, Non-condensing
Cooling Free-air Convection

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