VMK SERIES

1 Watt DC/DC Converter
Dual Output
3000 VDC Isolation

vitec dc conversion

FEATURES AND APPLICATIONS

- Ultra Compact 6 Pin SIL Package
- Low Ripple and Noise
- 3000 VDC Isolation
- High Efficiency
- RoHS ✓
- Mobile Applications
- Portable Equipments
- Telecommunication Instruments
- Mixed Analog / Digital Subsystems

GENERAL DESCRIPTION

The VMK series is a family of cost effective 1W dual output DC-DC converters. These converters achieve a smaller package SIP size, improved efficiency, lower output ripple and noise.
Models operate from an input bus voltage of 5 and 12 VDC offering output voltage levels of ±5.0, ±9.0, ±12.0 and ±15.0 VDC. High performance features include 3000 VDC input/output isolation, high efficiency operation, and output voltage accuracy of ±5% maximum. Standard features include an input range of ±10% tolerance, low output noise and ripple and –40°C to +85°C operating temperature range.

SIL 7 Package - Standard Types				
Type Number	Input Voltage [VDC]	Output Voltage [VDC]	Output Current [mA]	Efficiency [%]
VMK-0505S	5	±5,0	±100	75
VMK-0509S		±9,0	±55	79
VMK-0512S		±12,0	±42	80
VMK-0515S		±15,0	±33	82
VMK-1205S	12	±5,0	±100	75
VMK-1209S		±9,0	±55	79
VMK-1212S		±12,0	±42	80
VMK-1215S		±15,0	±33	82

*** non standard voltages on request**

Suffix P **continuous short circuit protection (on request)**

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ELECTRICAL SPECIFICATIONS

Specifications typical at +25°C, nominal Input voltage, rated output current unless otherwise specified.

Input Specifications

Voltage Range	±10%
Filter	Capacitors

Isolation Specification

Rated Voltage	3000 VDC
Leakage Current	1 mA
Resistance	$10^9\ \Omega$
Capacitance	50 pF, typ.

Output Specifications

Voltage Accuracy	±5%, max.
Voltage Balance (Dual Outp.)	±1%
Ripple and Noise (20 MHz BW)	75 mVp-p, max.
Short Circuit Protection	Momentary
Option P	Continuous (on request)
Line Voltage Regulation	±1.2% / 1.0% of Vin
Load Voltage Regulation	±8%, Load=20~100%
Temperature Coefficient	±0.02%/°C

General Specifications

Efficiency	75% to 82%
Switching Frequency	90 KHz, typ.

Environmental Specification

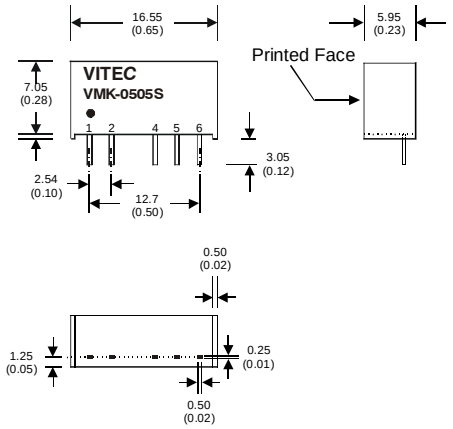
Operating Temperature	-40°C to +85°C
Max. Case Temperature	+100°C
Storage Temperature	-40°C to +125°C
Derating	None required
Humidity	max. 90%, non-condensing
Cooling	Free-air convection

Physical Characteristics

Dimension SIP	16.55 x 5.95 x 7.55 mm
	0.65 x 0.23 x 0.30 inches
Weight	1.8 g
Case Material	Non-conductive black plastic

SIL 6 Package

3kVDC Isolation	
Pin	Dual Output
1	+V Input
2	-V Input
4	-V Output
5	Common
6	+V Output



Notes:
All dimensions in millimeters (inches).
Tolerance ±0.25mm (0.01).
Specifications can be changed without prior notice.
Products are not intended for and must not be used in life support systems, human implantation, nuclear facilities or systems or any other application where product failure or malfunction of the component could lead to loss of life or catastrophic property damage

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