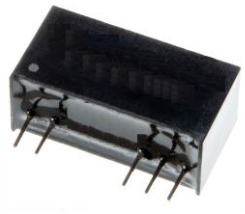
2 Watt, Regulated
DC/DC Converters
Series DV2-S9-1R-5KV



Features

- 2 Watt Regulated Outputs
- Compact SIP-9 Package
- Efficiency to 84%
- Low Leakage Current <2µA
- Fixed Switching Frequency
- Continuous Short Circuit Protection
- Meets Fire & Smoke EN45545-2
- 5000VDC I/O Isolation Rated for 250Vac Working Voltage
- Shock & Vibration EN50155 (EN61373) Complain
- Safety Meets IEC/EN/UL 62368-1, IEC/EN/ES60601-1 2x MOPP

MODEL NUMBER	INPUT VOLTAGE [VDC]	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT [mA]		EFF. [%]	CAP. [µF]
			MIN.	MAX.	TYP.	MAX. LOAD
DV2-S9-1R-05S05-5KV	4,5 – 7 (5)	5	0	400	81	820
DV2-S9-1R-05S12-5KV		12	0	167	83	470
DV2-S9-1R-05S15-5KV		15	0	134	83	470
DV2-S9-1R-05D05-5KV		±5	0	±200	82	470
DV2-S9-1R-05D12-5KV		±12	0	±83	83	220
DV2-S9-1R-05D15-5KV		±15	0	±67	81	220
DV2-S9-1R-12S05-5KV	9,6 – 14,4 (12)	5	0	400	81	820
DV2-S9-1R-12S12-5KV		12	0	167	84	470
DV2-S9-1R-12S15-5KV		15	0	134	83	470
DV2-S9-1R-12D05-5KV		±5	0	±200	81	470
DV2-S9-1R-12D12-5KV		±12	0	±83	83	220
DV2-S9-1R-12D15-5KV		±15	0	±67	82	220
DV2-S9-1R-15S05-5KV	12 – 18 (15)	5	0	400	81	820
DV2-S9-1R-15S12-5KV		12	0	167	84	470
DV2-S9-1R-15S15-5KV		15	0	134	83	470
DV2-S9-1R-15D05-5KV		±5	0	±200	81	470
DV2-S9-1R-15D12-5KV		±12	0	±83	83	220
DV2-S9-1R-15D15-5KV		±15	0	±67	80	220
DV2-S9-1R-24S05-5KV	19,2 – 28,8 (24)	5	0	400	80	820
DV2-S9-1R-24S12-5KV		12	0	167	82	470
DV2-S9-1R-24S15-5KV		15	0	134	82	470
DV2-S9-1R-24D05-5KV		±5	0	±200	81	470
DV2-S9-1R-24D12-5KV		±12	0	±83	81	220
DV2-S9-1R-24D15-5KV		±15	0	±67	80	220

Note:
1. Nominal Input Voltage: 5V, 12V, 24V or 48V

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INPUT SPECIFICATIONS:

Input Voltage Range		See Table
Input Surge Voltage (100ms max.)	5V	15Vdc max.
	12V	25Vdc max.
	15V	25Vdc max.
	24V	35Vdc max.
No Load Input Current (Io=0A)	Vin 5, Vo 5V	5mA typ.
	Vin 5V, Vo Others	20mA typ.
	Vin 12V, Vo 5V	4mA typ.
	Vin 12V, Vo Others	10mA typ.
	Vin 15V, Vo 5V	4mA typ.
	Vin 15V, Vo Others	8mA typ.
	Vin 24V, Vo 5V	3mA typ.
	Vin 24V, Vo Others	6mA typ.
Full Load Input Current	Vin 5V	482-494mA typ.
	Vin 12V	199-206mA typ.
	Vin 15V	159-167mA typ.
	Vin 24V	102-104mA typ.
Inrush Current		0,1A²s max.
Input Reflected Ripple Current		30mA typ.
Input Filter		Capacitive

OUTPUT SPECIFICATIONS:

Voltage Set Point Accuracy	Full Load	±3,0% max.
Output Voltage Balance	Full Load, Dual	±1,0% max.
Ripple & Noise, 20MHz BW	Vo 5V, ±5V	100mV pk-pk, max.
	Vo Others	125mV pk-pk, max.
Temperature Coefficient		±0.03%/°C
Line Regulation	High Line to Low Line, Full Load	±0.5% max.
Load Regulation	Full Load to 0% Load, Single	±0,5% max.
	Full Load to 0% Load, Dual	±1,0% max.
Cross Regulation	Asymmetrical Load 25%/100%	±4,0% max.
Short Circuit Protection		Continuous, Auto Recovery

GENERAL SPECIFICATIONS:

Efficiency		See Table
Isolation Voltage	1 minute; Input to Output	5000VDC max.
Isolation Resistance	Input to Output	1000 Mohm min.
Isolation Capacitance		15pF typ.
Leakage Current	240VAC, 60Hz	2µA max.
Working Voltage	rated	250VAC max.
Switching Frequency		250KHz typ.
Operating Ambient Temperature	Derating, above 80°C, see Derating Curve	-40°C to +95°C
Operating Case Temperature	At the center part of case plate	-40 min. / 105°C max.
Storage Temperature		-55°C to +125°C
Humidity		95% RH max. Non condensing
MTBF	MIL-STD-217F,GB,25°C, Full Load	10000 KHrs typ.
Shock/Vibration		MIL-STD-810F Compliant
Altitude		5000m Operating, 12000m Transport
Thermal Shock		MIL-STD-810F
EMI		Meets EN55032 Class B with external Filter
ESD		Meets EN61000-4-2 Level 2: Air±8kV, contact ±4kV
Radiated Immunity		Meets EN61000-4-3 80-1000MHz, 3V/m
Fast Transient		Meets EN61000-4-4 On power input port, ±0,5kV, external input TVS required
Surge		Meets EN61000-4-5 Line to Line, ±0,5kV, external input TVS required
Conducted Immunity		Meets EN61000-4-6 0,15-80MHz, 3V
Magnetic Field Immunity		Meets EN61000-4-8 50 or 60Hz, 3A/m (rms)
Dimensions		19,6 x 9,9 x 12,5 mm
Potting Material		UL94V-0
Case Material		Non-Conductive Black Plastic, UL94V-0
Weight		4.8g typ.

All Specifications at TA = 25°C, Vin = nominal voltage

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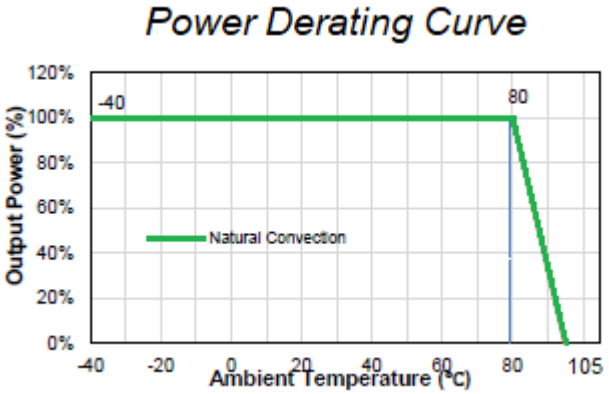
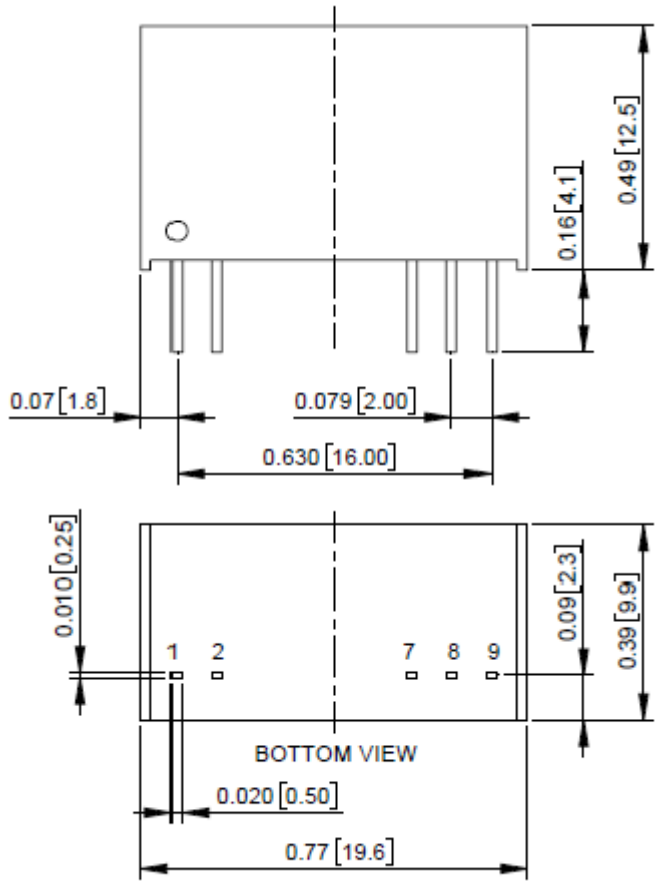


Case SIP 9

All dimensions in inches (mm)
Tolerances: Inches: x.xx=±0.02, .x.xxx=±0.010 Millimeters: x.x=±0.5, x.xx=±0.25
Pin Size: x.xxx=±0.004 Inch , x.xx=±0.10 mm



PIN CONNECTION		
PIN	SINGLE	DUAL
1	+Vin	+Vin
2	-Vin	-Vin
7	-Vout	-Vout
8	No Pin	Common
9	+Vout	+Vout

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