



20 Watt, 4:1 Wide Input DC/DC Converters Series DV204A



Features



- 20 Watt Isolated Output
- Regulated Outputs
- 1"x1" Shielded Metal Case
- 4:1 Wide Input Range
- Low No Load Power Consumption
- Efficiency to 90%
- Safety Meets UL60950-1, EN60950-1, IEC60950-1
- I/O Isolation 1500 VDC
- Input Under-Voltage Protection
- Over Current Protection
- Short Circuit Protection Continuous
- Remote ON/OFF
- Without Tantalum Capacitors Inside
- CE Mark Meets 2014/30/EU

MODEL NUMBER	INPUT VOLTAGE RANGE [VDC]	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT [mA] MIN.	OUTPUT CURRENT [mA] MAX.	INPUT CURRENT NO LOAD [mA] TYP.	INPUT CURRENT FULL LOAD [mA] TYP.	EFF. [%] TYP.	CAP. LOAD [μF] MAX.	CASE
DV9-36-3,3S4500A	9 – 36	3,3	4500	0	10	699	88	5000	A
DV9-36-05S4000A		5	4000	0	10	920	90	4000	
DV9-36-12S1670A		12	1670	0	10	938	89	1650	
DV9-36-15S1330A		15	1330	0	10	933	89	1300	
DV9-36-12D830A		±12	±830	0	10	938	88	800	
DV9-36-15D660A		±15	±660	0	10	926	89	650	
DV18-75-3,3S4500A	18 – 75	3,3	4500	0	8	349	88	5000	
DV18-75-05S4000A		5	4000	0	8	460	90	4000	
DV18-75-12S1670A		12	1670	0	8	466	89	1650	
DV18-75-15S1330A		15	1330	0	8	467	89	1300	
DV18-75-12D830A		±12	±830	0	8	469	88	800	
DV18-75-15D660A		±15	±660	0	8	466	88	650	

Note:

1. Nominal Input Voltage 24V or 48V.
2. Measure at 12VDC for 24 Vin, 24VDC for 48 Vin.
3. Measure at Nominal Input Voltage.
4. Suffix "-K" for Heat Sink mounted, for example DV9-36-05S4000A-K.

INPUT SPECIFICATIONS:

Input Voltage Range.....	24V.....	9 – 36VDC
	48V.....	18 – 75VDC
Input Surge Voltage (1sec. max.)	24V.....	50 VDC max.
	48V.....	100 VDC max.
Under Voltage Shutdown.....	24Vin power up.....	8,8 VDC typ.
	24Vin power down.....	8,0 VDC typ.
	48Vin power up.....	17 VDC typ.
	48Vin power down.....	16 VDC typ.
Input Filter		PI Type
Positive Logic Remote ON/OFF Control: (Note 3)		
Logic Compatibility		CMOS or Open Collector TTL, ref. to -Vin
Module ON		>3.5Vdc to 75Vdc or Open Circuit
Module OFF		<1,2VDC

OUTPUT SPECIFICATIONS:

Voltage Accuracy		±1,5% max.
Voltage Balance (Dual).....		±1,5% max.
Transient Response	75% - 100% Step Load change.....	Error band ±5% Vout nominal, Recovery Time <250µ sec.
Temperature Coefficient.....		0,03%/°C
Ripple and Noise, 20 MHz BW (Note1).....	Vo 3,3V/5V.....	75mV p-p max.
	Vo 12V/15V.....	100mV p-p max.
Short Circuit Protection.....		Continuous
Line Regulation (From low to high line)	Single.....	±0,2% max.
	Dual.....	±0,5% max.
Load Regulation (From full load to min. load)	Single.....	±0,2% max.
	Dual.....	±1,0% max.
Over Voltage Protection		Zener or TVS Clamp
Current Limit.....		110% - 170% Nominal Output
External Trim Adj. Range (only output models only)		±10%
Start up time		20ms max.

GENERAL SPECIFICATIONS:

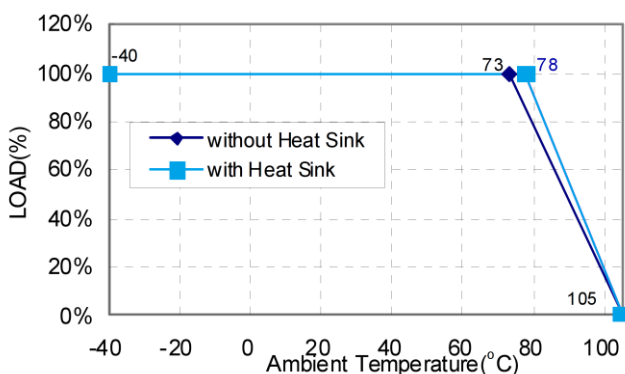
Efficiency.....		See Table
Isolation Voltage I/O		1500 VDC min.
Isolation Resistance		10 ⁹ Ω min.
Isolation Capacitance		1500pF typ.
Switching Frequency	Vo 3,3V/5V.....	270KHz typ.
	Others.....	330KHz typ.
Operating Ambient Temperature Range		-40°C to +85°C
Derating, above 65°C		Linearly to Zero Power at +105°C
Case Temperature (Note 2)		105°C max.
Cooling.....		Natural Convection
Storage Temperature Range		-55°C to +125°C
Humidity.....		95% RH max. Non condensing
MTBF (MIL-STD-217F,GB, 25°C, Full Load.....		1000k hrs
Dimension		25,40 x 25,40 x 10,2 (mm)
Case Material		Black Coated Copper with Non-Conductive Base
Weight.....		18 g

Note:

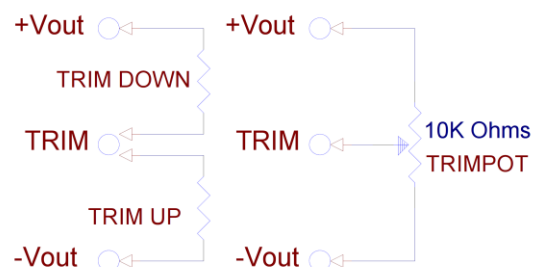
- The Output Ripple and Noise is measured with 10µF tantalum and 1µF ceramic capacitor across output.
 - Maximum case temperature under any operating condition should not be exceeded 105°C.
 - Suffix "N" to the Model Number with Negative Logic Remote ON/OFF
- Module ON
- Module OFF

All Specifications Typical at Nominal Line, Full Load and 25°C. Unless Otherwise Noted

DERATING CURVE DV9-36-05S4000A



EXTERNAL OUTPUT TRIM



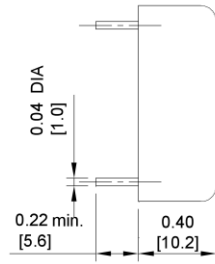
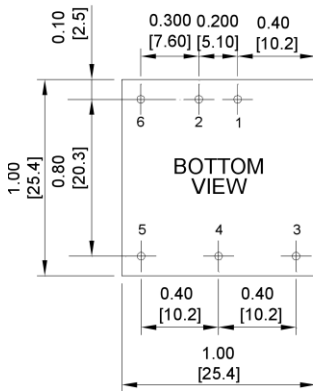
Technische Änderungen vorbehalten / Technical change reserved without notice

CASE A

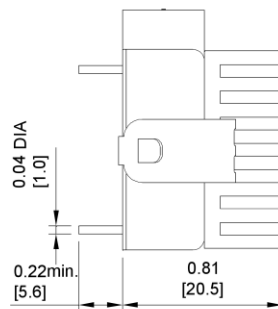
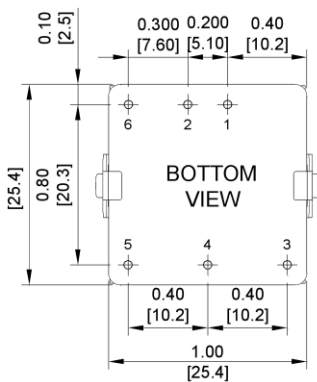
Series DV204A

All Dimensions in Inches (mm)

Tolerance: Inches: x.xx=±0.04 ; x.xxx=±0.010
 mm: x.x = ±0.5mm ; x.xx = ±0.25mm



Suffix "K" Type



PIN CONNECTION DV204A

Pin	Single	Dual
1	+V Input	+V Input
2	-V Input	-V Input
3	+V Output	+V Output
4	Trim	Common
5	-V Output	-V Output
6	Remote	Remote