



**3 Watt, Regulated, 8:1 INPUT
DC/DC Converters SMD
Series DVS3B8-H**



Features

- 3 Watt Regulated Outputs
- SMD Package
- Efficiency to 83%
- Operating Temperature -40°C to +85°C
- 3000 VDC I/O Isolation
- Safety Meets IEC/EN/UL 62368-1
- Fixed Switching Frequency
- Continuous Short Circuit Protection
- OCP/OVP/UVLO Protection
- Positive Remote ON/OFF (Optional)
- TRIM (Optional)
- Meets EN55032 Class A Without External Filter

MODEL NUMBER	INPUT VOLTAGE [VDC]	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT [mA]		EFF. @24V [%]	EFF. @48V [%]	CAP. [μ F]
			MIN.	TYP.		TYP.	MAX. LOAD
DVS3B8-48S3,3H	9 – 75 (48)	3,3	0	600	74	70	600
DVS3B8-48S05H		5	0	600	79	75	500
DVS3B8-48S12H		12	0	250	82	80	250
DVS3B8-48S15H		15	0	200	83	80	200
DVS3B8-48D05H		± 5	0	± 300	79	74	300
DVS3B8-48D12H		± 12	0	± 125	82	80	250
DVS3B8-48D15H		± 15	0	± 100	82	78	200

Note:

1. Nominal Input Voltage: 48V
2. Measured at Nominal Input Voltage.
3. Suffix "R" to Model Number: Remote ON/OFF Logic Positive, Example: DV3B8-48S05HR
4. Suffix "T" to Model Number: TRIM, single Output Only Example: DV3B8-48S05HT
5. Suffix "RT": Remote ON/OFF Logic Positive and TRIM, Example: DV3B8-48S05HRT

INPUT SPECIFICATIONS:

Input Voltage Range.....	48V	9 – 75 VDC
Input Surge Voltage.....	100ms max.	100Vdc max.
Turn-On Voltage Threshold	100% Load	typ. 8,1 VDC
Turn-On Voltage Threshold	100% Load	typ. 7,5 VDC
No Load Input Current ($I_{o=0A}$)	V_o 3,3V, 5V	5mA typ.
	V_o 12V, $\pm 5V$	7mA typ.
	V_{in} 15V	8mA typ.
	$V_o \pm 12V$	9mA typ.
	$V_o \pm 15V$	10mA typ.
Full Load Input Current		59-85mA typ.
Maximum Input Current.....	V_{in} 9V, Full Load	420mA max.
Inrush Current.....		0,1A ² s max.
Input Reflected Ripple Current.....		TBD mA typ.
Input Filter		Pi Type
ON/OFF Control, Positive Remote On/Off Logic, Refer to $-V_{in}$ pin.		
Logic Low (Module Off)	$V_{on/off}$ at $I_{on/off}=1.0mA$	0V min. / 1,2V max.
Logic High (Module On)	Pin Open = ON, High Impedance	
Off Converter Input Current	Shutdown input idle current	1mA max.

OUTPUT SPECIFICATIONS:

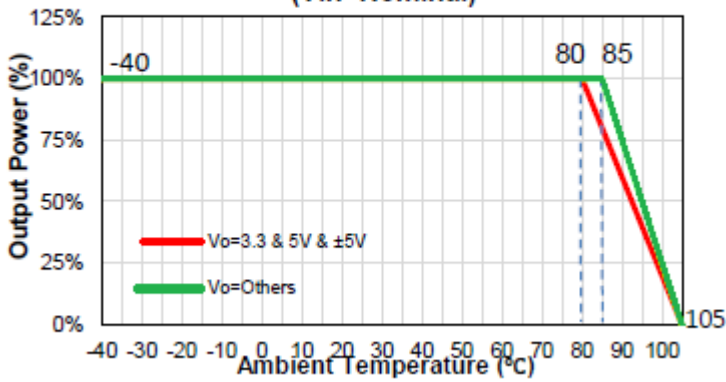
Voltage Set Point Accuracy	$V_{in}48V$, Full Load, V_o 3,3V	$\pm 2,0\%$ max.
	$V_{in}48V$, Full Load, Others	$\pm 1,5\%$ max.
Output Voltage Balance	$V_{in}48V$, Full Load, Dual	$\pm 1,0\%$ max.
Ripple & Noise, 20MHz BW	Full Load, 1 μ F Ceramic Capacitors	100mV pk-pk, max.
Output Voltage Current Transient: 75% to 100% of I_{omax} Step Load Change (within 1% V_{out} nominal)		
Error Band.....		$\pm 5\%$ max.
Recovery Time.....		250 μ s max.
Turn-ON Delay and rise Time: Full Load (Constant Resistive Load)		
Turn -On Delay Time, From ON/OFF Control ($V_{on/off}$ to 10% V_o Remote On)		15msec. typ.
Turn -On Delay Time, From Input (V_{in} to 10% V_o Power Up)		15msec. typ.
Output Voltage Rise Time (10% V_o to 90% V_o)		8msec. typ.
Temperature Coefficient.....		$\pm 0.05\%/^{\circ}C$
Line Regulation.....	High Line to Low Line, Full Load, V_o 3,3V	$\pm 0.5\%$ max.
	High Line to Low Line, Full Load, V_o Others	$\pm 0,2\%$ max.
Load Regulation	Full Load to 0% Load, Single	$\pm 0,5\%$ max.
Cross Regulation	Asymmetrical Load 25%/100%, Dual	$\pm 5,0\%$ max.
Over Current Protection	Hiccup, Auto Recovery	110% min. / 230% max.
Over Voltage Protection		Built-in Zener Diode to Clamp Output Voltage
Short Circuit Protection		Continuous, Auto Recovery

GENERAL SPECIFICATIONS:

Efficiency		See Table
Isolation Voltage.....	1 minute; Input to Output	3000VDC max.
Isolation Resistance	Input to Output	1000 Mohm
Isolation Capacitance.....		1000pF typ.
Switching Frequency		300KHz typ.
Operating Ambient Temperature Derating,above 80 or 85 $^{\circ}C$,see Derating Curve		-40 $^{\circ}C$ to +85 $^{\circ}C$
Operating Case Temperature	At the center part of case plate	-40 min. / 105 $^{\circ}C$ max.
Storage Temperature		-55 $^{\circ}C$ to +125 $^{\circ}C$
Humidity		95% RH max. Non condensing
MTBF	MIL-STD-217F,GB,25 $^{\circ}C$, Full Load	400 Khrs min.
Shock/Vibration		MIL-STD-810F Compliant
Altitude		2000m Operating
Thermal Shock		MIL-STD-810F
EMI.....	without external Filter	Meets EN55032 Class A
	With external Filter	Meets EN55032 Class B
ESD.....		Meets EN61000-4-2 Level 2: Air $\pm 8kV$, contact $\pm 4kV$
Radiated Immunity		Meets EN61000-4-3 80-1000MHz, 3V/m
Fast Transient.....		Meets EN61000-4-4 On power input port, $\pm 0,5kV$, external input TVS required
Surge		Meets EN61000-4-5 Line to Earth $\pm 1,0kV$, Line to Line, $\pm 0,5kV$, external input TVS
Conducted Immunity		Meets EN61000-4-6 0,15-80MHz, 3V
Dimensions	SMD Version DVS	31,8 x 25,4 x 11,4 mm
Potting Material.....		UL94V-0
Case Material		Plastic, DAP, UL94V-0
Base Plate		Non-Conductive Base
Weight.....		12,5g typ.

All Specifications at $T_A = 25^{\circ}C$, $V_{in} =$ nominal voltage

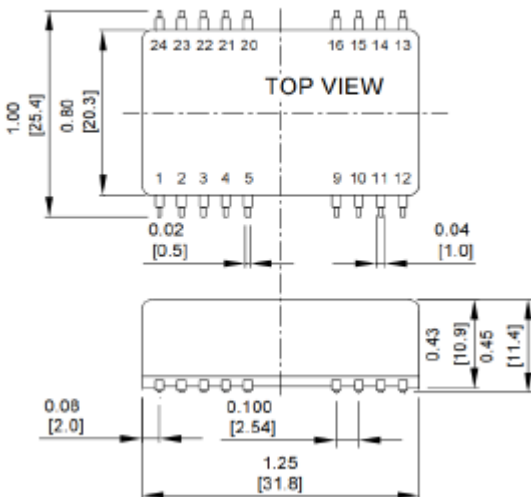
Power Derating Curve
(Vin=Nominal)



Case SMD

All dimensions in inches (mm)
 Tolerances: Inches: x.xx±0.02, x.xxx±0.0010 Millimeters: x.x±0.5, x.xx±0.25
 Pin Size: 0.02±0.002 Inch, 0.5±0.05 mm DIA

SMD Version DVS



Pin	Dual Output SMD	Dual Output SMD
1	NC	NC
2	-V Input	-V Input
3	-V Input	-V Input
4,5	NC	NP
9	NC	Common
10	NC	NC
11	NC	-V Output
12	NC	NC
13	NC	NC
14	+V Output	+V Output
15	NC	NC
16	-V Output	Common
20,21	NC	NC
22,23	+V Input	+V Input
24	NC	NC

*NP-NO PIN
 *NC-NO CONNECTION WITH PIN
 *PIN 1-NP OR REMOTE ON/OFF (Optional)
 *PIN 10-NC OR TRIM (Optional)
 *PIN 1-NP OR REMOTE ON/OFF (Optional)

Technische Änderungen vorbehalten / Technical change reserved