V·INFINITY

VSD-25 Series Single Output DC-DC Converter

Rev. 7-2007

Features

- 2:1 wide input range
- Short circuit, overload, over-voltage protected
- 1500VDC I/O isolation
- Built in EMI filter, low ripple noise
- Fixed switching frequency at 83KHz
- 100% full load burn-in test
- Low cost, high reliability
- 1 year warranty
- 25 Watt

RoHS

Model[1,3]	Input Voltage	Output Voltage	Output Current	Ripple[2] & Noise	Load/Line Regulation	Efficiency
VSD-25A-5	9.2~18V DC	5V DC	5 A	100mV	±0.5%	71%
VSD-25A-12	9.2~18V DC	12V DC	2.1 A	120mV	±0.3%	72%
VSD-25A-24	9.2~18V DC	24V DC	1.1 A	150mV	±0.2%	75%
VSD-25B-5	19~36V DC	5V DC	5 A	100mV	±0.5%	72%
VSD-25B-12	19~36V DC	12V DC	2.1 A	120mV	±0.3%	75%
VSD-25B-24	19~36V DC	24V DC	1.1 A	150mV	±0.2%	78%
VSD-25C-5	36~72V DC	5V DC	5 A	100mV	±0.5%	74%
VSD-25C-12	36~72V DC	12V DC	2.1 A	120mV	±0.3%	78%
VSD-25C-24	36~72V DC	24V DC	1.1 A	150mV	±0.2%	81%

Notes:

1 All parameters Not specifically mentioned are measured at normal input, rated load and 25ºC of ambient temp.

2 Ripple & noise are measured at 20MHz of bandwidth by using a 12” twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.

3 The power supply is considered a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives.

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Input Voltage

Parameter	Conditions/Description	Min	Nom	Max	Units
Input voltage	A	9.2	12	18	DC
	B	19	24	36	DC
	C	36	48	72	DC

Output

Parameter	Conditions/Description	Min	Nom	Max	Units
DC Voltage adj.		4.5	5	5.5	VDC
		11	12	16	VDC
		23	24	30	VDC
Over Voltage	5 at 10% load	5.75		6.75	VDC
Protection	12 at 10% load	16.8		20	VDC
	24 at 10% load	31.5		37.5	VDC
DC output power	A		25		W
	B		25.2		W
	C		26.4		W
Overload	hiccup mode, recovers automatically after fault condition is removed. For all models.		105~150%		
Voltage Tolerance	Model B is ±2%, ±1% for all other models				
Hold up time	12VDC/24VDC/48VDC at full load	50			mS
Set up	For all models	2.5s			

Protection Circuit

Parameter	Conditions/Description
Input Fuse	Built-in ac fuse. A blown fuse usually indicates permanent damage to the power supply serviceable by factory only.
Overload	Current limiting starts at 110-140% of the rated output current in foldback mode and recovers automatically.
Short circuit	Short circuit can be continuous. Recovers automatically upon removal of short.
Output Over-voltage	Output is protected agaist overvoltage. Unit shuts down and latches when voltage at output terminals exceeds 130%. AC input needs to be reset to restart the power supply.
Over temp.	Power supply shuts down when temperature is in excess of 85 ºC. Auto recovery.

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General and Safety

Parameter	Conditions/Description	Min	Nom	Max	Units
Operating temp.	(refer to output derating curve)	-10		60	ºC
Storage temp.		-20		85	ºC
Operating humid.	Non-condensing	20%		90%	RH
Storage humid.	Non-condensing	10%		95%	RH
Temperature coefficient		±0.3% / ºC (0~50ºC) on +5V output			
Safety (EMC)	EN55022 Class B (radiation), En61000-4-2, 3, 4, 6, 8, ENV50204				
Vibration	2G 10min/i cycle, 60 min on X, Y and Z Axis	10		500	Hz
Withstand Voltage	I/P-O/P	1500			VDC
	I/P-FG	1500			VDC
	O/P-FG	500			VDC
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG	100mΩ min. / 500VDC			
Cooling	Convection				

Mechanical

Parameter	Conditions/Description	Min	Nom	Max	Units
Weight				380	grams
Enclosure	99(L) x 97(W) x 35(H) mm				inches

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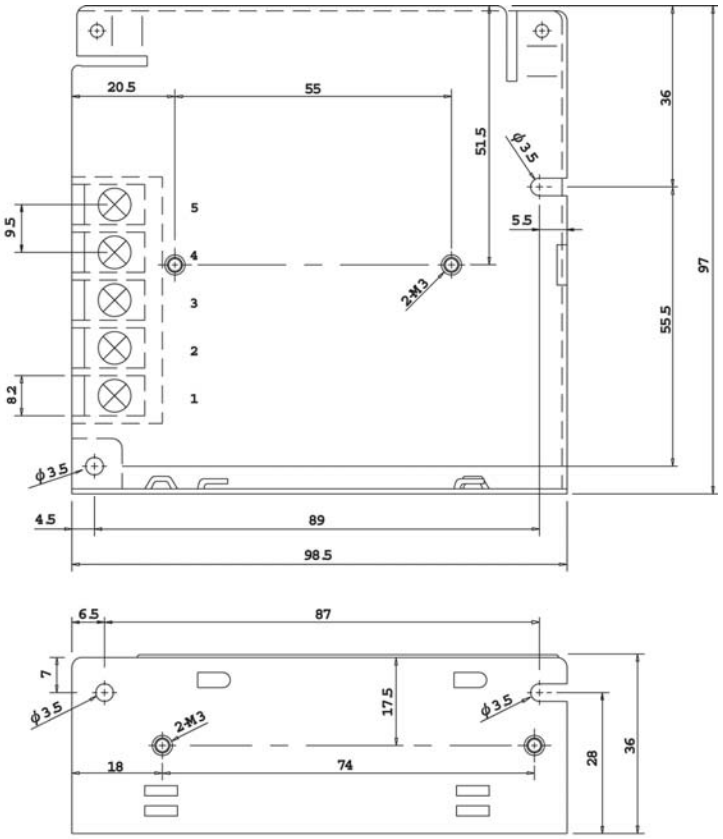
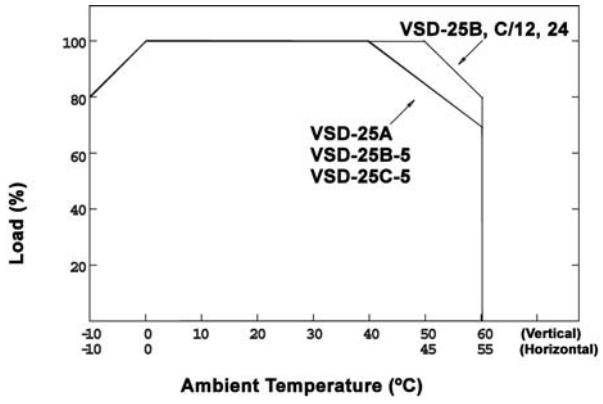


Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	DC Input V-	4	DC Output V+
2	DC Input V+	5	DC Output V-
3	FG ⏚		

Output Derating



Static Characteristics