

SLV20 SERIES

SINGLE OUTPUTS



AVAILABLE Q1 - 2000

PATENT PENDING

FEATURES:

- High Efficiency to 90% @ 5V
- Pick & Place Packaging
- External Trim
- -40C To +100C Operation
- 1500Vdc Isolation
- Synchronous Rectification
- Wide Input Range 2:1
- Remote On/Off
- Under-Voltage Lockout
- Overvoltage & Short Circuit Protection
- **Surface Mount & Thru-Hole Types**
- Open Frame Construction

The SLV20 series of DC-DC converters have been designed as a surface-mount & thru-hole solution for a wide range of applications where low voltage, high efficiency and ease of assembly are needed. The SLV20 series packs up to 20 watts of power in 1.00" x 2.0" x .400" open frame construction and operating temperatures of -40c to + 105C. All models are designed to meet UL1950,CSA 950 and EN 60950.

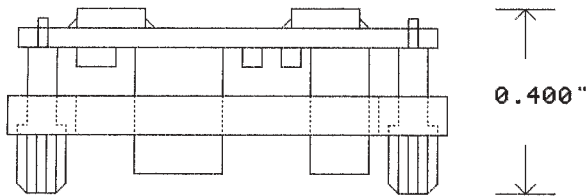
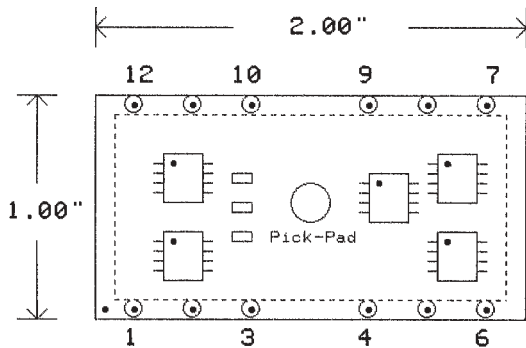
MODEL SELECTION GUIDE:

INPUT VOLTAGE NOM. RANGE	I _{in} @ VIN FL NL	OUTPUT VOLTAGE	OUTPUT CURRENT (FL)	PO (W)	OUTPUT OVP	TYPICAL EFFICIENCY	MODEL NUMBER NOTE (**)		
12Vdc	9-18Vdc	0.823	10 mA	1.80	4.4	8	3.6	81%	SLV20-12S1V8(**)
12Vdc	9-18Vdc	0.992	10 mA	2.50	4	10	3.6	84%	SLV20-12S2V5(**)
12Vdc	9-18Vdc	1.163	10 mA	3.30	3.6	12	3.9	86%	SLV20-12S3V3
12Vdc	9-18Vdc	1.498	10 mA	5.00	3.2	16	6.8	89%	SLV20-12S05(**)
24Vdc	18-36Vdc	0.412	10 mA	1.80	4	8	3.6	81%	SLV20-24S1V8(**)
24Vdc	18-36Vdc	0.595	10 mA	2.50	4	12	3.6	84%	SLV20-24S2V5(**)
24Vdc	18-36Vdc	0.727	10 mA	3.30	4	15	3.9	86%	SLV20-24S3V3(**)
24Vdc	18-36Vdc	0.936	10 mA	5.00	4	20	6.8	89%	SLV20-24S05(**)
48Vdc	36-75Vdc	0.203	10 mA	1.80	5.5	8	3.6	82%	SLV20-48S1V8(**)
48Vdc	36-75Vdc	0.294	10 mA	2.50	4.8	12	3.6	85%	SLV20-48S2V5(**)
48Vdc	36-75Vdc	0.287	10 mA	3.30	4.5	15	3.9	87%	SLV20-48S3V3(**)
48Vdc	36-75Vdc	0.463	10 mA	5.00	4	20	6.8	90%	SLV20-48S05(**)

Note (**): Insert suffix; **SM** for Surface-mount type or **TH** for Thru-hole Type mounting • **MODIFICATIONS AND CUSTOMS AVAILABLE**

20 WATT DC-DC

SPECIFICATIONS: All Specifications Are Typical @ Nominal Input, Full Load & 25C Unless Otherwise Stated and are Subject to Change without Notice



PIN CONNECTIONS

PIN NUMBER	FUNCTION
1	-Vin
2	-Vin
3	-Vin
4	N/C
5	-sense
6	-Vo
7	+Vo
8	+sense
9	Trim
10	ON/OFF
11	-Vin
12	+Vin

INPUT

Input Voltage Range	2:1
Note (3)	9-18Vdc (12V Models) 18-36Vdc (24V Models) 36-75Vdc (48V Models)
Input filter	Pi Type
Under Voltage Lockout	8.5V (12V Models) 16.5V (24V Models) 32V (48V Models)
Remote	+5V or open, Ref. (-)Vin
:ON	+0.7V, Ref (-)Vin
:OFF	
Conducted Noise	EN55022,level A (Note 5)

OUTPUT

Output Power	20 W Continuous(Max)
Output Voltage/current	See Model Table
Output Setting Accuracy	
Singles	+/- 1% typ., +/- 1.5%max.
Load Regulation	
Singles(FL-NL.)	+/- 0.5% Note (4)
Line Regulation	+/- 0.2%
Total Error Band	
Singles	+/- 3%, Line/Load&Temp.
Ripple & Noise(20Mhz BW)	75mV
Transient Response (FL-1/2L)	2 % Deviation, 200uS
Temperature Coefficient	+/- .01%/c
Short circuit Protection	Indefinite, Modulated, Automatic Recovery

GENERAL

Efficiency	See Model Table
Isolation Voltage	1500Vdc (1Min)
Isolation Resistance	100M
Switching Frequency	400Khz
MTBF	1.0M hrs.MIL-HDBK-217F Ground Benign @ 25C

ENVIRONMENTAL

Operating Temperature Range	-40C To +105C (See Derating Curve)
	-40C To +55C@ FL
Storage Temperature Range	-55C To +125C
Maximum Junction Temperature	125 C
Humidity	5% To 95% RH, Non-condensing
Cooling	Natural Convection
Processing (Note 2)	(230C peak, 20 sec.)

MECHANICAL

Size	1.75" X 2.00" X 0.500"
Weight	
Mounting	SMD & Through Hole Types
Case/Material	Open-Frame, 94V-0 FR-4 P.C.B.

NOTES:

- 1) Output Power is up to 20W, see Io rating On "Model selection Guide".
- 2) Model numbers are for SMD type pin configuration, replace suffix (SM) with (TH) for through-hole type
- 3) Typical start-up for 12Vin models is 9V.Maximum startup is 9.5V.
- 4) Operation is allowed to No-Load, however operation below 10% load may cause ripple & noise to exceed spec.