Size: 0.45in x 0.24in x 0.40in
(11.5mm x 6.0mm x 10.2mm)

FEATURES

- Output Current up to 303mA
- Internal Input & Output Filter
- UL94-V0 Non-Conductive Case
- 1 Watt Unregulated Output Power
- 4 Pin Single-In-Line Package (SIP)
- Input/Output Isolation up to 1000VDC
- High Efficiency for Low Power Application
- ISO9001 Certified Manufacturing Facilities
- Compliant to RoHS II & REACH
- Design meets UL60950-1, EN60950-1, & IEC60950-1
- CE Marked
- Multiple Input Voltage Ranges

APPLICATIONS

- Wireless Network
- Telecom/Datacom
- Industry Control System
- Measurement
- Semiconductor Equipment

DESCRIPTION

Wall's SU series offers 1 watt of output power in a four pin SIP (single inline) package. This series consists of single output models ranging from 3.3VDC to 15VDC and multiple input voltages ranging from 3.3VDC to 24VDC. Models are RoHS compliant and CE Marked, and have UL60950-1, EN60950-1, & IEC60950-1 safety approvals. These units are ideal for low power applications and are highly efficient. The UL94V-0 plastic case is non-conductive and includes both internal input and output filters.

MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage	Output Current		Ripple & Noise[1]	No Load Input Current[2]	Output Power	Maximum Capacitive Load[3]	Efficiency
			Min Load	Max Load					
SU33S33	3.3VDC (3.0-3.6VDC)	3.3VDC	30.3mA	303mA	100mVp-p	42mA	1W	150µF	68%
SU33S05		5VDC	20mA	200mA		38mA		100µF	70%
SU33S09		9VDC	11.1mA	111mA		45mA		22µF	71%
SU33S12		12VDC	8.4mA	84mA		45mA		47µF	72%
SU33S15		15VDC	6.6mA	66mA		45mA		33µF	75%
SU05S33	5VDC (4.5-5.5VDC)	3.3VDC	30.3mA	303mA	100mVp-p	25mA	1W	150µF	68%
SU05S05		5VDC	20mA	200mA		25mA		100µF	70%
SU05S09		9VDC	11.1mA	111mA		25mA		22µF	74%
SU05S12		12VDC	8.4mA	84mA		25mA		47µF	78%
SU05S15		15VDC	6.6mA	66mA		24mA		33µF	80%
SU09S09	9VDC (8.1~9.9VDC)	9VDC	11.1mA	111mA	100mVp-p	20mA	1W	22µF	74%
SU12S33	12VDC (10.8-13.2VDC)	3.3VDC	30.3mA	303mA	100mVp-p	14mA	1W	150µF	68%
SU12S05		5VDC	20mA	200mA		10mA		100µF	70%
SU12S09		9VDC	11.1mA	111mA		13mA		22µF	74%
SU12S12		12VDC	8.4mA	84mA		14mA		47µF	78%
SU12S15		15VDC	6.6mA	66mA		13mA		33µF	80%
SU15S33	15VDC (13.5-16.5VDC)	3.3VDC	30.3mA	303mA	100mVp-p	9mA	1W	150µF	68%
SU15S05		5VDC	20mA	200mA		9mA		100µF	70%
SU15S09		9VDC	11.1mA	111mA		9mA		22µF	74%
SU15S12		12VDC	8.4mA	84mA		8mA		47µF	78%
SU15S15		15VDC	6.6mA	66mA		9mA		33µF	80%
SU24S33	24VDC (21.6-26.4VDC)	3.3VDC	30.3mA	303mA	100mVp-p	6mA	1W	150µF	70%
SU24S05		5VDC	20mA	200mA		6mA		100µF	70%
SU24S09		9VDC	11.1mA	111mA		6mA		22µF	74%
SU24S12		12VDC	8.4mA	84mA		5mA		47µF	78%
SU24S15		15VDC	6.6mA	66mA		6mA		33µF	80%

SPECIFICATIONS

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
INPUT SPECIFICATIONS						
Input Voltage Range	3.3V Nominal Input		3.0	3.3	3.6	VDC
	5V Nominal Input		4.5	5	5.5	
	9V Nominal Input		8.1	9	9.9	
	12V Nominal Input		10.8	12	13.2	
	15V Nominal Input		13.5	15	16.5	
	24V Nominal Input		21.6	24	26.4	
Input Filter			Capacitor			
OUTPUT SPECIFICATIONS						
Output Voltage			See Table			
Voltage Accuracy			-5.0		+5.0	%
Line Regulation	Low Line to High Line at Full Load	3.3V, 5V models		1	1.3	% of Vin
		All Others		1	1.2	
Load Regulation	10% to 100% Load	3.3V, 5V models	-15		+15	%
		All Others	-10		+10	
Output Power			See Table			
Output Current			See Table			
Maximum Capacitive Load			See Table			
Ripple & Noise	Measured by 20MHz bandwidth			100		mVp-p
Temperature Coefficient			-0.1		+0.1	%/ºC
PROTECTION						
Short Circuit Protection					1	Sec.
ENVIRONMENTAL SPECIFICATIONS						
Operating Ambient Temperature	Without Derating		-40		+85	ºC
Storage Temperature			-55		+125	ºC
Relative Humidity			5		95	% RH
Thermal Shock			MIL-STD-810F			
Vibration			MIL-STD-810F			
MTBF	MIL-HDBK-217F, Full Load			985,000		hours
GENERAL SPECIFICATIONS						
Efficiency			See Table			
Switching Frequency				90		KHz
Isolation Voltage (1 minute)	Input to Output		1000			VDC
Isolation Resistance	500VDC		1			GΩ
Isolation Capacitance					80	pF
PHYSICAL SPECIFICATIONS						
Weight			0.053oz (1.5g)			
Dimensions (L x W x H)			0.45in x 0.24in x 0.40in (11.5mm x 6.0mm x 10.2mm)			
Case Material			Non-Conductive Black Plastic			
Potting Material			Epoxy (UL94 V-0)			
SAFETY						
Safety Approvals	IEC60950-1 UL60950-1 EN60950-1					

**Due to advances in technology, specifications subject to change without notice.*

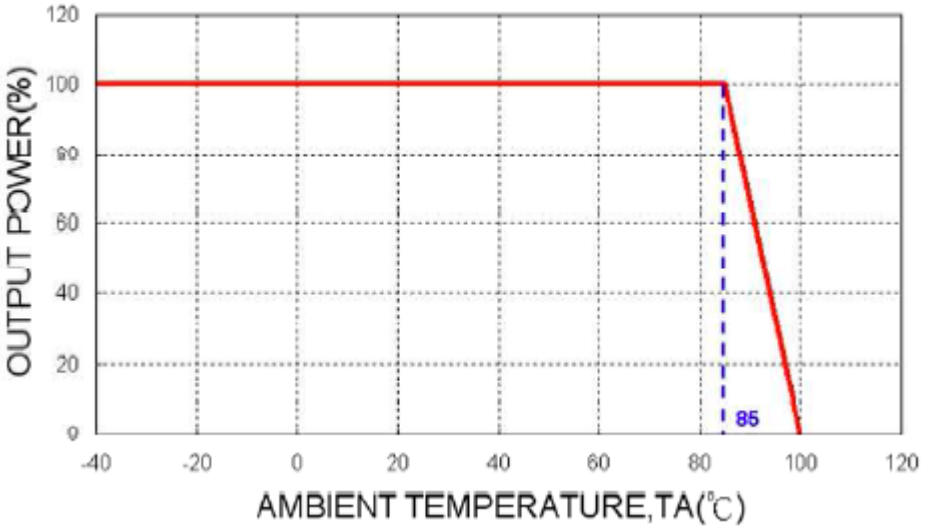
NOTES

(1) Typical Value at Nominal Input Voltage and Full Load
(2) Typical Value at Nominal Input Voltage and No Load
(3) Test by minimum Vin and constant resistive load. The output requires a minimum loading on the output to maintain specified regulation. Operation under no-load condition will not damage these devices, however they may not meet all listed specification.

CAUTION: This power module is not internally fused. An input line fuse must always be used.

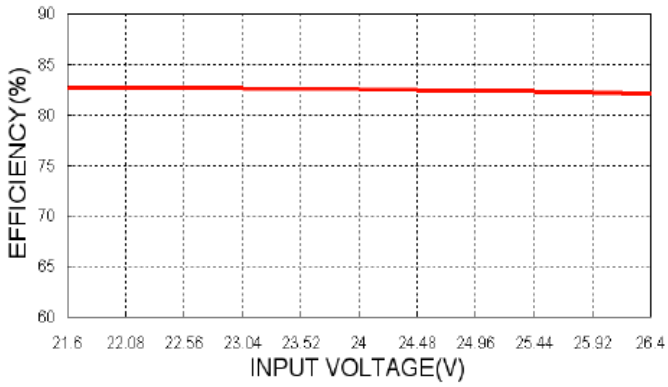
DERATING CURVES

SU24S12 Derating Curve

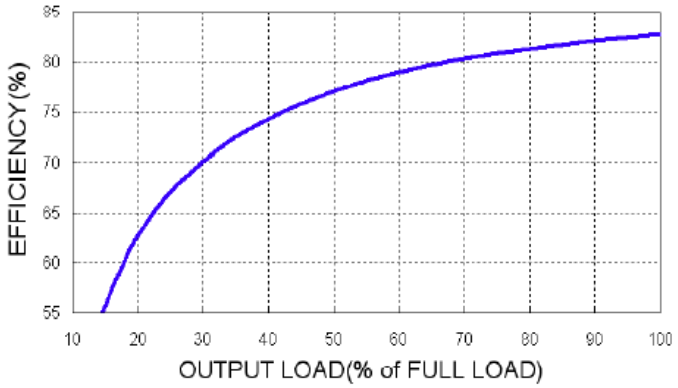


EFFICIENCY GRAPHS

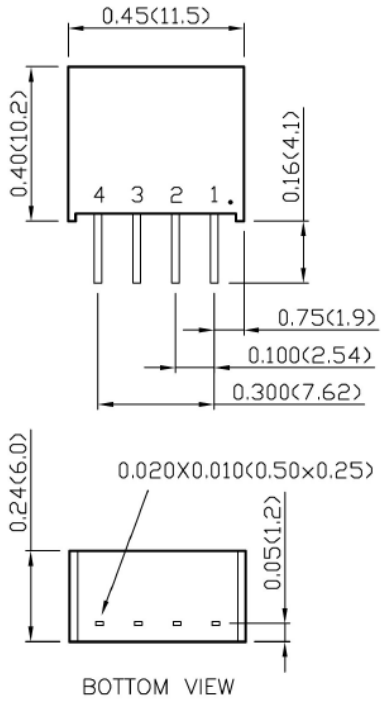
SU24S12 Efficiency vs Input Voltage



SU24S12 Efficiency vs Output Load



MECHANICAL DRAWINGS



PIN CONNECTION

PIN	SINGLE
1	-Vin
2	+Vin
3	-Vout
4	+Vout

Notes:
1. Tolerance: X.XX±0.02 (X.X±0.5)
   X.XX±.0.01 (X.XX±0.25)
2. Pin Pitch Tolerance ±0.01 (0.25)

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001-2008 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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