



- Features :
  - 1000VDC I/O isolation
  - Internal SMD technology
  - Built-in EMI filter
  - Cooling by free air convection
  - Non-conductive plastic case
  - Dual in line package
  - SIP packge is available
  - 100% burn-in test
  - Low cost / High reliability
  - 2 years warranty

**SELECTION GUIDE**

ORDER NO.	SUS01L-05	SUS01M-05	SUS01N-05	SUS01O-05	SUS01L-09	SUS01M-09	SUS01N-09	SUS01O-09
DC OUTPUT VOLTAGE	5V				9V			
OUTPUT CURRENT RANGE	0 ~ 200mA				0 ~ 111mA			
EFFICIENCY	73%	74%	72%	74%	75%	79%	80%	77%

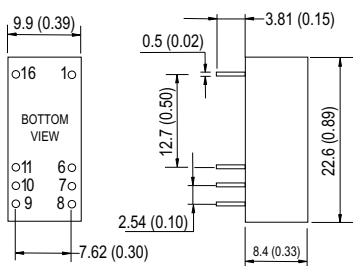
ORDER NO.	SUS01L-12	SUS01M-12	SUS01N-12	SUS01O-12	SUS01L-15	SUS01M-15	SUS01N-15	SUS01O-15
DC OUTPUT VOLTAGE	12V				15V			
OUTPUT CURRENT RANGE	0 ~ 84mA				0 ~ 67mA			
EFFICIENCY	78%	82%	83%	83%	79%	82%	83%	83%

**SPECIFICATION**

OUTPUT	RATED POWER	1W								
	RIPPLE & NOISE (max.) Note.2	100mVp-p								
	LINE REGULATION Note.3	±1.2% for 1% input variation								
	LOAD REGULATION Note.4	±8.0%								
	VOLTAGE ACCURACY	±2.0%								
	SWITCHING FREQUENCY	50KHz min.								
INPUT	VOLTAGE RANGE	4.5 ~ 5.5V	10.8 ~ 13.2V	21.6 ~ 26.4V	43.2 ~ 52.8V	4.5 ~ 5.5V	10.8 ~ 13.2V	21.6 ~ 26.4V	43.2 ~ 52.8V	
	NORMAL VOLTAGE	5V	12V	24V	48V	5V	12V	24V	48V	
	INPUT CURRENT	Full load	280mA	112mA	55mA	28mA	280mA	112mA	55mA	28mA
		No load	21mA	11mA	10mA	3mA	21mA	11mA	10mA	3mA
	FILTER	Capacitor type								
PROTECTION	Fuse recommended									
PROTECTION	OVERLOAD	Momentary								
		Protection type : Broken								
	SHORT CIRCUIT	Momentary								
		Protection type : Broken								
ENVIRONMENT	WORKING TEMP.	-25 ~ +71°C (Refer to output load derating curve)								
	WORKING HUMIDITY	20% ~ 90% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-25 ~ +105°C, 10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.03% / °C (0 ~ 50°C)								
	VIBRATION	10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes								
SAFETY & EMC	WITHSTAND VOLTAGE	I/P-O/P:1KVDC								
	ISOLATION RESISTANCE	I/P-O/P: 100M Ohms / 500VDC / 25°C / 70% RH								
	ISOLATION CAPACITANCE	80pF max.								
OTHERS	MTBF	700khrs min. MIL-HDBK-217F(25°C)								
	DIMENSION	22.6*9.9*8.4mm or 0.89**0.39**0.33" inch (L*W*H)								
	WEIGHT	3.1g								

**Mechanical Specification**

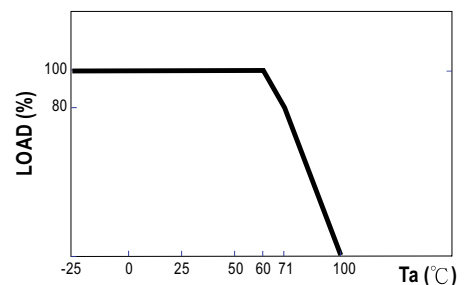
Unit: mm (inch)



**Pin Configuration**

Pin No.	Output
1 & 16	+Vin
6 & 11	-Vout
7 & 10	+Vout
8 & 9	-Vin

**Derating Curve**



**NOTE**

1. All parameters are specified at normal input, rated load, 25°C 70% RH ambient.
2. Ripple & noise are measured at 20MHz by using a 12" twisted pair terminated with a 0.1uf & 47uf capacitor.
3. Line regulation is measured from low line to high line at rated load.
4. Load regulation is measured from 20% to 100% rated load.

Model : SUS01M-12    1W    DC-DC    Unregulated Single Output Converter  
 V1 : 12V / 0~84mA

**OUTPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-2%~+2% (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	+0.8%	P
2	RIPPLE & NOISE	100mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	35mV	P
3	LINE REGULATION	-12%~+12% (Typ)	I/P:10.8VDC~13.2VDC O/P:FULL LOAD Ta:25°C	-10.84%~+11.5%	P
4	LOAD REGULATION	-8%~+8% (Typ)	I/P:12VDC O/P:20%~FULL LOAD Ta:25°C	-1.82%~+1.74%	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	EFFICIENCY	82% (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	81.4%	P
2	DC CURRENT	112mA (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	107mA	P

**ENVIRONMENT TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT							
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 20HRS I/P:12 VDC O/P:FULL LOAD Ta=25°C			P							
		<table border="1"> <thead> <tr> <th>Position</th> <th>P/N</th> <th>TEMP Ta=25°C</th> </tr> </thead> <tbody> <tr> <td>CASE</td> <td>SUS01M-12</td> <td>36.2°C</td> </tr> </tbody> </table>			Position	P/N	TEMP Ta=25°C	CASE	SUS01M-12	36.2°C		
Position	P/N	TEMP Ta=25°C										
CASE	SUS01M-12	36.2°C										



**SAFETY TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:1KVDC/min	I/P-O/P:1KVDC/min Ta:25°C	I/P-O/P:0.02mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ	I/P-O/P:500VDC Ta:25°C	I/P-O/P:11GΩ NO DAMAGE	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2003.7.17	SUS01M-12	PASS	FRANK.CHEN	MAX LIN