



- 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

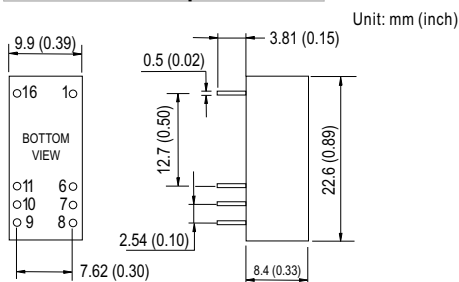
ORDER NO.	SRS-0505	SRS-1205	SRS-2405	SRS-4805	SRS-0509	SRS-1209	SRS-2409	SRS-4809	
OUTPUT	DC VOLTAGE	5V				9V			
	CURRENT RANGE	0 ~ 100mA				0 ~ 56mA			
	EFFICIENCY (TYP.)	60%				60%			

ORDER NO.	SRS-0512	SRS-1212	SRS-2412	SRS-4812	SRS-0515	SRS-1215	SRS-2415	SRS-4815	
OUTPUT	DC VOLTAGE	12V				15V			
	CURRENT RANGE	0 ~ 42mA				0 ~ 34mA			
	EFFICIENCY (TYP.)	60%				60%			

SPECIFICATION

OUTPUT	RATED POWER	0.5W								
	RIPPLE & NOISE (max.) Note.2	100mVp-p								
	LINE REGULATION	±1.0%								
	LOAD REGULATION Note.3	±1.0%								
	VOLTAGE ACCURACY	±2.0%(Typ.)				±3.0%(max.)				
	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	166mA	66mA	32mA	18mA	166mA	66mA	32mA	18mA
		No load	12mA	10mA	8mA	6mA	12mA	10mA	8mA	6mA
	FILTER	Capacitor type								
PROTECTION	Fuse recommended									
PROTECTION (Note. 4)	OVERLOAD	150 ~ 350% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed								
	SHORT CIRCUIT	All output equipped with short circuit Protection type : Hiccup mode, recovers automatically after fault condition is removed								
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	600khrs 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								

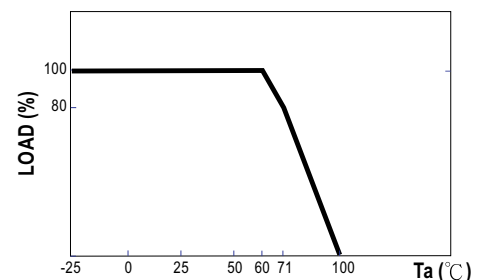
Mechanical Specification



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.Load regulation is measured from 10% to 100% rated load.
- 4.Please prevent the converter from operating in overload or short circuit condition for more than 30 seconds.

Model : SRS-1209 0.5W DC-DC Single Output Converter
 V1 : 9V / 0~56mA

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE ACCURACY	-2%~+2% (Max)	I/P:12VDC O/P:50% LOAD Ta:25°C	+1.6%	P
2	RIPPLE & NOISE	100mVp-p (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	10mV	P
3	LINE REGULATION	-1%~+1% (Max)	I/P:10.8VDC~13.2VDC O/P:FULL LOAD Ta:25°C	-0%~+0.2%	P
4	LOAD REGULATION	-1%~+1% (Max)	I/P:12VDC O/P:MIN-FULL LOAD Ta:25°C	-0.2%~+0.2%	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	DC VOLTAGE RANGE	10.8VDC~13.2VDC (Typ)	I/P:TESTING O/P:FULL LOAD Ta:25°C	9.6V~13.2V	P
2	EFFICIENCY	63% (Typ)	I/P:12VDC O/P:FULL LOAD Ta:25°C	63.9%	P
3	DC CURRENT	75mA (Max)	I/P:12VDC O/P:FULL LOAD Ta:25°C	67mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	YES	I/P:12VDC O/P:TESTING Ta:25°C	289% Hiccup Mode Reset Auto Recovery	P
2	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P:12VDC O/P:FULL LOAD Ta:25°C	NO DAMAGE Hiccup Mode Reset Auto Recovery	P

ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 15HRS I/P:12VDC O/P:FULL LOAD Ta=25°C			P

Position	P/N	TEMP Ta=25°C
CASE	SRS-1209	38.1°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:9GΩ NO DAMAGE	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2003.7.21	SRS-1209	PASS	FRANK.CHEN	MAX LIN