

KEY FEATURES

- Compact SIP8 Package
- High Efficiency up to 89%
- 4:1 Wide Input Range
- Without Tantalum Capacitors Inside
- 2250VDC Isolation
- Regulated Outputs
- Remote ON/OFF Control
- Operating Temperature: -40°C...+85°C (with derating)
- Fixed Switching Frequency
- Input Under-Voltage Protection
- Low No Load Power Consumption
- Continuous Short Circuit Protection
- 3-Years Product Warranty


ELECTRICAL SPECIFICATIONS

Model No. (Single Output)	SP10F-24-5S	SP10F-24-12S	SP10F-24-15S	SP10F-24-24S
Input Voltage (V.DC.)	24V (9-36V)	24V (9-36V)	24V (9-36V)	24V (9-36V)
Output Voltage (V.DC.)	5V / 2000mA	12V / 833mA	15V / 666mA	24V / 417mA
Efficiency	84%	88.5%	89%	88.5%
Capacitor Load (max)	2,000 μ F	1,000 μ F	680 μ F	220 μ F

Model No. (Single Output)	SP10F-48-5S	SP10F-48-12S	SP10F-48-15S	SP10F-48-24S
Input Voltage (V.DC.)	48V (18-75V)	48V (18-75V)	48V (18-75V)	48V (18-75V)
Output Voltage (V.DC.)	5V / 2000mA	12V / 833mA	15V / 666mA	24V / 417mA
Efficiency	84%	87.5%	87.5%	88.5%
Capacitor Load (max)	2,000 μ F	1,000 μ F	680 μ F	220 μ F

Model No. (Dual Output)	SP10F-24-5D	SP10F-24-12D	SP10F-24-15D
Input Voltage (V.DC.)	24V (9-36V)	24V (9-36V)	24V (9-36V)
Output Voltage (V.DC.)	\pm 5V / \pm 1000mA	\pm 12V / \pm 417mA	\pm 15V / \pm 333mA
Efficiency	84.5%	88%	88%
Capacitor Load (max)	1,000 μ F	\pm 470 μ F	\pm 330 μ F

Model No. (Dual Output)	SP10F-48-5D	SP10F-48-12D	SP10F-48-15D
Input Voltage (V.DC.)	48V (18-75V)	48V (18-75V)	48V (18-75V)
Output Voltage (V.DC.)	\pm 5V / \pm 1000mA	\pm 12V / \pm 417mA	\pm 15V / \pm 333mA
Efficiency	84.5%	88%	87.5%
Capacitor Load (max)	1,000 μ F	\pm 470 μ F	\pm 330 μ F

ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No. (Single Output)		SP10F-24-5S SP10F-48-5S	SP10F-24-12S SP10F-48-12S	SP10F-24-15S SP10F-48-15S	SP10F-24-24S SP10F-48-24S
Max Output Wattage (W)		10 W			
Input	Voltage (V.DC.)	SP10F-24-xS: 24V (9-36V) SP10F-48-xS: 48V (18-75V)			
	Input Filter	C type			
Output	Voltage (V.DC.)	5V	12V	15V	24V
	Voltage Accuracy	±1%			
	Current (mA) max	2000	833	666	417
	Line Regulation (LL-HL) (max.)	±0.2%			
	Load Regulation (0-100%) (max.)	±1%			
	Minimum Load	0%			
	Capacitor Load (max.)	2,000uF	1,000uF	680uF	220uF
Protection	Ripple & Noise (max.)	100mV	1% of Vout		
	Over Power Protection	Auto-recovery			
Isolation	Short Circuit Protection	Continuous			
	Voltage	2250 VDC			
	Resistance	10 ⁹ ohms			
Environment	Capacitance	1000 pF			
	Operating Temperature	-40°C...+85°C (with derating)			
	Storage Temperature	-55°C...+125°C			
	Case Temperature (Note 2)	+105°C max.			
	Temperature Coefficient	±0.02%/°C			
	Humidity	95% RH			
Physical	MTBF	>1,930,000 h @ 25°C (MIL-HDBK-217F)			
	Dimensions (L x W x H)	0.87 x 0.37 x 0.47 Inches (22.0 x 9.5 x 12.0 mm) Tolerance ±0.5 mm			
	Case Material	Non-Conductive Black Plastic			
	Weight	5.5 g			
Remote ON/OFF	Cooling Method	Natural Convection			
	DC-DC ON	Open or +5V ~ 15V			
	DC-DC OFF	When -DC IN and ON/OFF CTL is Short (or 0 VDC ~ +0.2VDC)			
	Input Current of Remote Control Pin	1mA			
EMC	Remote off State Input Current	4mA			
	EMI (Conducted & Radiated Emission) (Note 3)	EN 55032 class A			

ELECTRICAL SPECIFICATIONS

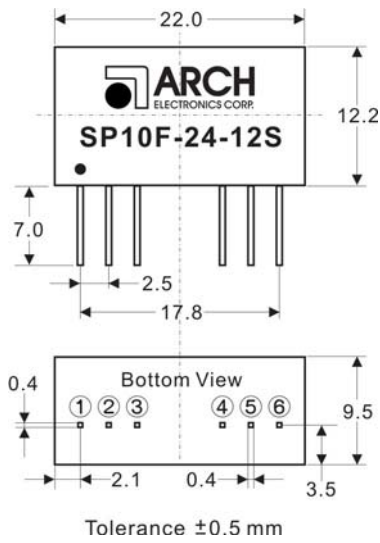
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No. (Dual Output)		SP10F-24-5D SP10F-48-5D	SP10F-24-12D SP10F-48-12D	SP10F-24-15D SP10F-48-15D
Max Output Wattage (W)		10 W		
Input	Voltage (V.DC.)	SP10F-24-xD: 24V (9-36V) SP10F-48-xD: 48V (18-75V)		
	Input Filter	C type		
Output	Voltage (V.DC.)	±5V	±12V	±15V
	Voltage Accuracy	±1%		
	Current (mA) max	±1000	±417	±333
	Line Regulation (LL-HL) (max.)	±0.5%		
	Load Regulation (0-100%) (max.)	±1%		
	Minimum Load	0%		
	Capacitor Load (max.)	±1,000uF	±470uF	±330uF
	Ripple & Noise (max.)	100mV	1% of Vout	
Protection	Over Power Protection	Auto-recovery		
	Short Circuit Protection	Continuous		
Isolation	Voltage	2250 VDC		
	Resistance	10 ⁹ ohms		
	Capacitance	1000 pF		
Environment	Operating Temperature	-40°C...+85°C (with derating)		
	Storage Temperature	-55°C...+125°C		
	Case Temperature (Note 2)	+105°C max.		
	Temperature Coefficient	±0.02%/°C		
	Humidity	95% RH		
	MTBF	>1,930,000 h @ 25°C (MIL-HDBK-217F)		
Physical	Dimensions (L x W x H)	0.87 x 0.37 x 0.48 Inches (22.0 x 9.5 x 12.2 mm) Tolerance ±0.5 mm		
	Case Material	Non-Conductive Black Plastic		
	Weight	5.5 g		
	Cooling Method	Natural Convection		
Remote ON/OFF	DC-DC ON	Open or High Impedance		
	DC-DC OFF	4mA (typ.)		
EMC	EMI (Conducted & Radiated Emission) (Note 3)	EN 55032 class A		

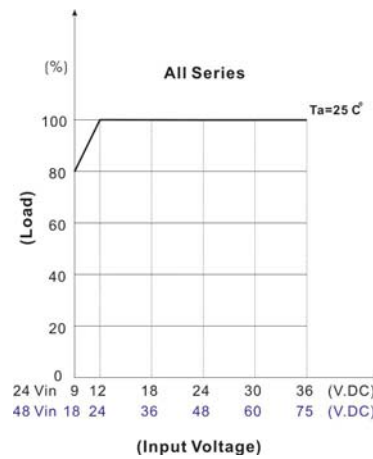
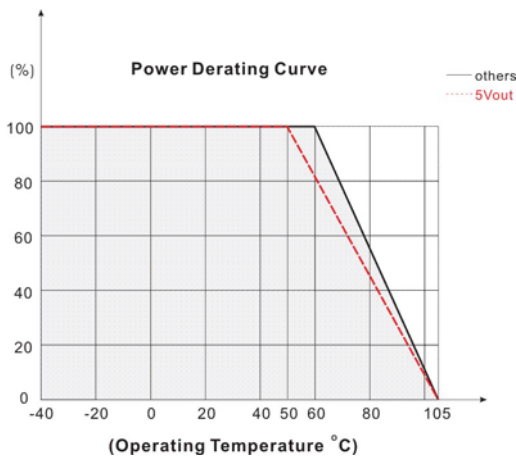
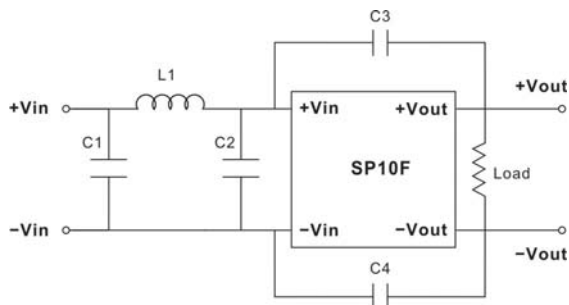
NOTE

- Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
- Maximum case temperature under any operating condition should not be exceeded 105°C.
- For EMI test, Please refer to below.
- Please refer to our PDF file "DC-DC Application" on our website: www.archcorp.com.tw

MECHANICAL DIMENSIONS

SP10F SERIES
10 Watts


PIN#	Single	Dual
1	-DC IN	-DC IN
2	+DC IN	+DC IN
3	CTRL	CTRL
4	+DC OUT	+DC OUT
5	-DC OUT	COMMON
6	NC	-DC OUT

DERATING

EMI


	L1	C1	C2	C3	C4
SP10F-24-xS, SP10F-24-xD	4.7uH	10uF / 50V	10uF / 50V	1000pF / 3KV	1000pF / 3KV
SP10F-48-xS, SP10F-48-xD	10uH	4.7uF / 100V	4.7uF / 100V	1000pF / 3KV	1000pF / 3KV