

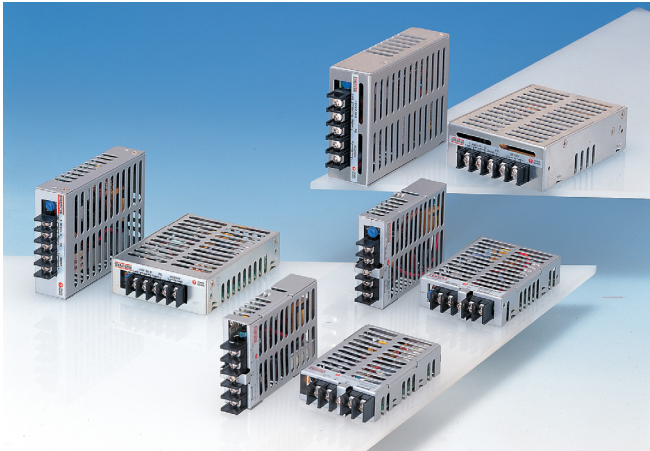


**ETA-USA**

HIGH QUALITY SWITCHING POWER SUPPLIES

# 25 WATT DC-DC CONVERTER

**SVA-SC series  
Single Channel**



## Features

1. Very small (one of the smallest in Japan)
2. No derating when mounted on a horizontal surface
3. Low impedance capacitors
4. Over voltage protection
5. EMI: Complies with FCC/A

The SV-series has been developed to follow ETA's philosophy of "Miniaturization and high efficiency" of power supplies. The small size and high efficiency are suitable for many applications, especially small equipment.

## SVA-SC12 Input Specifications

Specifications SVA**SC12 25WATTS/1 OUTPUT	Model				
	SVA05SC12	SVA12SC12	SVA15SC12	SVA24SC12	SVA48SC12
<b>Input Characteristic</b>					
Input Voltage	DC12V				
Input Range	DC9.2-16V				
Inrush Current	Not specified				
Efficiency [%] (typical) *1	78	80	81	83	83

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**Sub.ETA ELECTRIC IND., CO. LTD.**  
 16170 Vineyard Blvd. #180  
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[www.eta-usa.com](http://www.eta-usa.com)

SVA-SC24 Input Specifications

Specifications SVA**SC24 25WATTS/1 OUTPUT	Model				
	SVA05SC24	SVA12SC24	SVA15SC24	SVA24SC24	SVA48SC24
<b>Input Characteristic</b>					
Input Voltage	DC24V				
Input Range	DC19-32V				
Inrush Current	Not specified				
Efficiency [%] (typical) *1	79	81	83	85	86

SVA-SC48 Input Specifications

Specifications SVA**SC48 25WATTS/1 OUTPUT	Model				
	SVA05SC48	SVA12SC48	SVA15SC48	SVA24SC48	SVA48SC48
<b>Input Characteristic</b>					
Input Voltage	DC48V				
Input Range	DC38-63V				
Inrush Current	Not specified				
Efficiency [%] (typical) *1	81	84	85	87	88

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**SVA-SC12 Output Specifications**

Specifications	Model				
	SVA05SC12	SVA12SC12	SVA15SC12	SVA24SC12	SVA48SC12
<b>SVA**SC12(25WATTS/1 OUTPUT)</b>					
<b>Output Characteristic</b>					
Output Voltage [V]	5	12	15	24	48
Output Current [A]	5.0	2.1	1.7	1.1	0.5
Voltage Adjust Range	+/-10% of Rated Output Voltage(at no load within input range)				
Ripple and Noise [mVp-p](maximum) *2	150	220	250	340	580
<b>Regulation</b>					
Statistic Line Regulation [mV](maximum)	40	96	120	192	384
Statistic Load Regulation [mV](maximum)	45	108	135	216	432
Temperature Coefficient *4	0.03%/°C				
Drift[mV](maximum) *5	40	75	90	135	255
Dynamic Load Regulation [mV](typical) *6	150	360	450	720	1440
Recovery Time *5	2.0mS(typical)				
Rise up time	100mS(maximum) at 25°C and rated input/output				
Hold up time	Not specified				
<b>Functions</b>					
Over current Protection	Current Limiting with automatic recovery				
≥110% of Rated Output [A]	5.50	2.31	1.87	1.21	0.55
Over voltage Protection	Output shutdown(to reset, leave 1minute after shutdown)				
≥110% of Rated Output [V]	5.50	13.2	16.5	26.4	52.8
Remote Sense	not available				
Remote On/Off	not available				
Reverse Voltage Protection	by internal fuse				
<b>Environmental</b>					
Operating Temperature	0 to +50°C				
Operating Humidity	85%RH(non-condensing)				
Storage Temperature	-20 to +85°C				
Storage Humidity	85%RH(non-condensing)				
Withstanding Voltage	Primary-Secondary AC2,000V for 1minute				
	Primary-Frame Ground AC2,000V for 1minute				
	Secondary-Frame Ground AC500V for 1minute				
Isolation Resistance	Primary-Secondary-Frame Ground 50MΩ(minimum) by DC500V insulation tester				
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/s <sup>2</sup> ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)				
Shock	294m/s <sup>2</sup>				
Cooling	Convection				
<input type="checkbox"/> Line Conduction Noise	Not specified				
<input type="checkbox"/> Safety	-				
Weight (typical)	210g				
Dimensions (mm)	73W x 95L x 24H				
<input type="checkbox"/> MTBF [H]	640,000				
<input type="checkbox"/> Switching Frequency[kHz](typical)	100 Fix.	100 Fix.	90 Fix.	90 Fix.	90 Fix.

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SVA-SC24 Output Specifications

Specifications	Model				
	SVA05SC24	SVA12SC24	SVA15SC24	SVA24SC24	SVA48SC24
SVA**SC24(25WATTS/1 OUTPUT)					
<b>Output Characteristic</b>					
Output Voltage [V]	5	12	15	24	48
Output Current [A]	5.0	2.1	1.7	1.1	0.5
Voltage Adjust Range	+/-10% of Rated Output Voltage(at no load within input range)				
Ripple and Noise [mVp-p](maximum) *2	150	220	250	340	580
<b>Regulation</b>					
Statistic Line Regulation [mV](maximum)	40	96	120	192	384
Statistic Load Regulation [mV](maximum)	45	108	135	216	432
Temperature Coefficient *4	0.03%/°C				
Drift[mV](maximum) *5	40	75	90	135	255
Dynamic Load Regulation [mV](typical) *6	150	360	450	720	1440
Recovery Time *5	0.3mS(typical)				
Rise up time	100mS(maximum) at 25°C and rated input/output				
Hold up time	Not specified				
<b>Functions</b>					
Over current Protection	Current Limiting with automatic recovery				
≥110% of Rated Output [A]	5.50	2.31	1.87	1.21	0.55
Over voltage Protection	Output shutdown(to reset, leave 1minute after shutdown)				
≥110% of Rated Output [V]	5.50	13.2	16.5	26.4	52.8
Remote Sense	not available				
Remote On/Off	not available				
Reverse Voltage Protection	by internal fuse				
<b>Environmental</b>					
Operating Temperature	0 to +50°C				
Operating Humidity	85%RH(non-condensing)				
Storage Temperature	-20 to +85°C				
Storage Humidity	85%RH(non-condensing)				
Withstanding Voltage	Primary-Secondary AC2,000V for 1minute				
	Primary-Frame Ground AC2,000V for 1minute				
	Secondary-Frame Ground AC500V for 1minute				
Isolation Resistance	Primary-Secondary-Frame Ground 50MΩ(minimum) by DC500V insulation tester				
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/s <sup>2</sup> ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)				
Shock	294m/s <sup>2</sup>				
Cooling	Convection				
□ Line Conduction Noise	Not specified				
□ Safety	-				
Weight (typical)	210g				
Dimensions (mm)	73W x 95L x 24H				
□ MTBF [H]	740,000				
□ Switching Frequency[kHz](typical)	90 Fix.	90 Fix.	90 Fix.	90 Fix.	90 Fix.

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## SVA-SC48 Output Specifications

<b>Specifications</b>	<b>Model</b>				
	<b>SVA**SC48(25WATTS/1 OUTPUT)</b>	<b>SVA05SC48</b>	<b>SVA12SC48</b>	<b>SVA15SC48</b>	<b>SVA24SC48</b>
<b>Input Characteristic</b>					
Input Voltage	DC48V				
Input Range	DC38-63V				
Inrush Current	Not specified				
Efficiency [%] (typical) *1	81	84	85	87	88
<b>Output Characteristic</b>					
Output Voltage [V]	5	12	15	24	48
Output Current [A]	5.0	2.1	1.7	1.1	0.5
Voltage Adjust Range	+/-10% of Rated Output Voltage(at no load within input range)				
Ripple and Noise [mVp-p](maximum) *2	150	220	250	340	580
<b>Regulation</b>					
Statistic Line Regulation [mV](maximum)	40	96	120	192	384
Statistic Load Regulation [mV](maximum)	45	108	135	216	432
Temperature Coefficient *3	0.03%/°C				
Drift[mV](maximum) *4	40	75	90	135	255
Dynamic Load Regulation [mV](typical) *5	150	360	450	720	1440
Recovery Time *5	0.3mS(typical)				
Rise up time	500mS(maximum) at 25°C and rated input/output				
Hold up time	Not specified				
<b>Functions</b>					
Over current Protection	Current Limiting with automatic recovery				
≥110% of Rated Output [A]	5.50	2.31	1.87	1.21	0.55
Over voltage Protection	Output shutdown(to reset, leave 1minute after shutdown)				
≥110% of Rated Output [V]	5.50	13.2	16.5	26.4	52.8
Remote Sense	not available				
Remote On/Off	not available				
Reverse Voltage Protection	by internal fuse				
<b>Environmental</b>					
Operating Temperature	0 to +50°C				
Operating Humidity	85%RH(non-condensing)				
Storage Temperature	-20 to +85°C				
Storage Humidity	85%RH(non-condensing)				
Withstanding Voltage	Primary-Secondary AC2,000Vfor 1minute				
	Primary-Frame Ground AC2,000V for 1minute				
	Secondary-Frame Ground AC500V for 1minute				
Isolation Resistance	Primary-Secondary-Frame Ground 50MΩ(minimum) by DC500V insulation tester				
Vibration	5-10Hz:10mm double amplitude,10-55Hz:19.6m/s <sup>2</sup> ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)				
Shock	294m/s <sup>2</sup>				
Cooling	Convection				
<input type="checkbox"/> Line Conduction Noise	Not specified				
<input type="checkbox"/> Safety	-				
Weight (typical)	210g				
Dimensions (mm)	73W x 95L x 24H				
<input type="checkbox"/> MTBF [H]	740,000				
<input type="checkbox"/> Switching Frequency[kHz](typical)	90 Fix.	90 Fix.	90 Fix.	90 Fix.	90 Fix.

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Conditions:

\*1 at DC12V and rated output

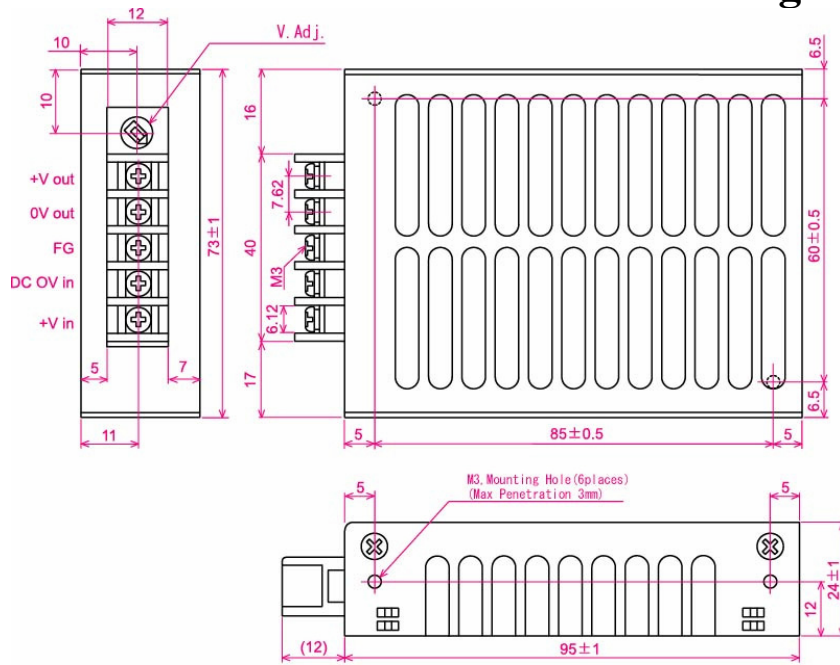
\*2 measured by a bayonet probe at the output connector at a 0 to 100MHz bandwidth

\*3 at 0 to +50°C

\*4 for 7hours from 1hour after switch-on at 25°C and rated input/output

\*5 when output current changed from 25% to 75% of rated output current rapidly at DC12V input

## Mechanical Drawing



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