

15 WATT DC-DC CONVERTER

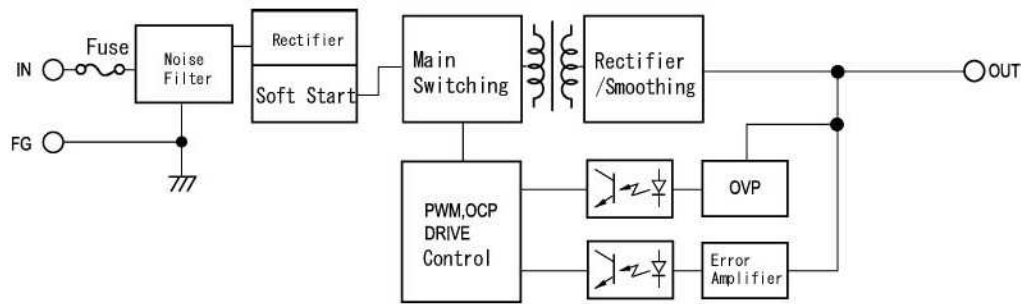
**SVM-SC12
SINGLE CHANNEL**

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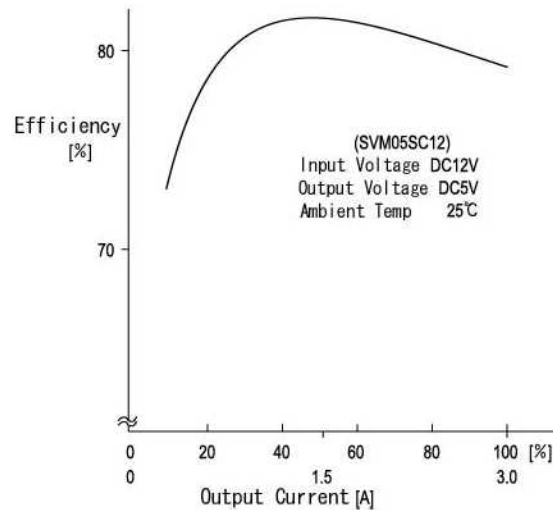


Specifications	Model				
SVM**SC12 15WATTS/1 OUTPUT	SVM05SC12	SVM12SC12	SVM15SC12	SVM24SC12	SVM48SC12
Input Characteristic					
Input Voltage	DC12V				
Input Range	DC9.2-16V				
Inrush Current	Not specified				
Efficiency [%] (typical) *1	79	80	82	83	83

Block Diagram



Efficiency Curve



Specifications	Model				
SVM**SC12 15WATTS/1 OUTPUT	SVM05SC12	SVM12SC12	SVM15SC12	SVM24SC12	SVM48SC12
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	100	170	200	290	530
Regulation					
a.Statistic Line Regulation [mV](maximum)	40	96	120	192	384
b.Statistic Load Regulation [mV](maximum)	45	108	135	216	432
c.Temperature Coefficient *3	0.03%/°C				
d.Drift[mV](maximum) *4	40	75	90	135	255
e.Dynamic Load Regulation [mV](typical) *5	150	360	450	720	1440
f.Recovery Time *5	0.5mS(typical)				
Rise up time	100mS(maximum) at 25°Cand rated input/output				
Hold up time	Not specified				
Functions					
Overcurrent Protection	Current Limiting with automatic recovery				
≥10% of Rated Output [A]	3.30	1.43	1.10	0.77	0.39
Overvoltage Protection	Output shutdown(to reset,leave 1minute after shutdown)				
≥10% 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				
Environmental					
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: 19.8m/s ² ,20minutes' period for 80minutes each along X,Y,Z axes(non-operating)				
Shock	294m/s ²				
Cooling	Convection				
Line Conduction Noise	Not specified				
Safety	-				
Weight (typical)	120g				
MTBF [H]	660,000				
Switching Frequency[kHz](typical)	90 Fix.	90 Fix.	90 Fix.	90 Fix.	90 Fix.

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°Cand rated input/output

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

15 WATT DC-DC CONVERTER

**SVM-SC24
SINGLE CHANNEL**

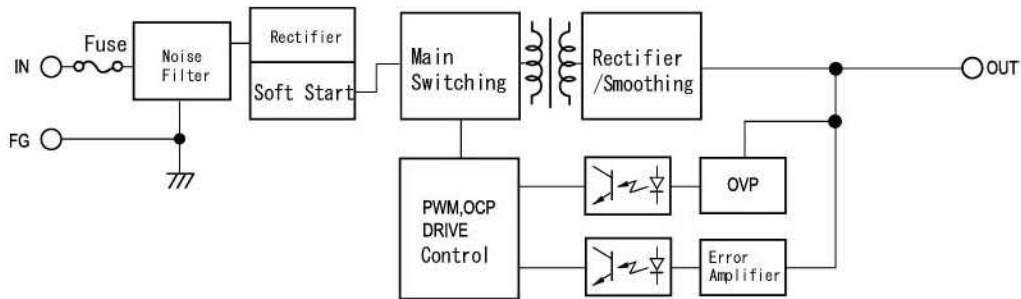
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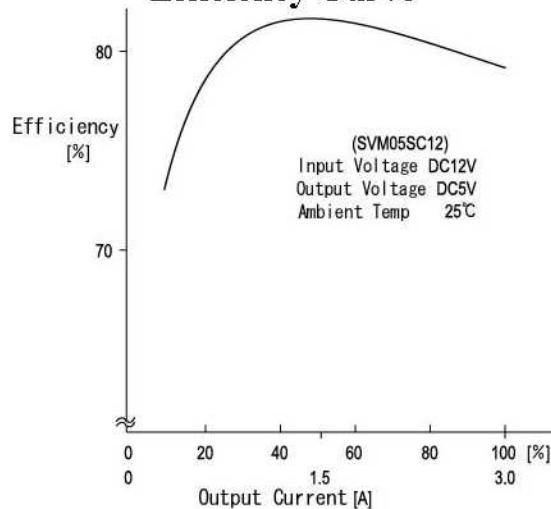


Specifications	Model				
SVM**SC24 15WATTS/1 OUTPUT	SVM05SC24	SVM12SC24	SVM15SC24	SVM24SC24	SVM48SC24
Input Characteristic					
Input Voltage	DC24V				
Input Range	DC19-32V				
Inrush Current	Not specified				
Efficiency [%] (typical) *1	79	81	82	84	85

Block Diagram



Efficiency Curve



Specifications	Model				
	SVM05SC24	SVM12SC24	SVM15SC24	SVM24SC24	SVM48SC24
SVM**SC24 15WATTS/1 OUTPUT					
Output Voltage [V]	5	12	15	24	48
Output Current [A]	3.0	1.3	1.0	0.7	0.35
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
Regulation					
a.Statistic Line Regulation [mV](maximum)	40	96	120	192	384
b.Statistic Load Regulation [mV](maximum)	45	108	135	216	432
c.Temperature Coefficient *3	0.03%/°C				
d.Drift[mV](maximum) *4	40	75	90	135	255
e.Dynamic Load Regulation [mV](typical) *5	150	360	450	720	1440
f.Recovery Time *5	0.3mS(typical)				
Rise up time	100mS(maximum) at 25°Cand rated input/output				
Hold up time	Not specified				
Functions					
Overcurrent Protection	Current Limiting with automatic recovery				
≥ 10% of Rated Output [A]	3.30	1.43	1.10	0.77	0.39
Overvoltage Protection	Output shutdown(to reset,leave 1minute after shutdown)				
≥ 10% 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				
Environmental					
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:10m m double amplitude,10-55Hz: 19.6m/s ² ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)				
Shock	294m/s ²				
Cooling	Convection				
Line Conduction Noise	Not specified				
Safety	-				
Weight (typical)	120g				
MTBF [H]	750,000				
Switching Frequency[kHz](typical)	90 Fix.	90 Fix.	90 Fix.	90 Fix.	90 Fix.

Conditions:

*1 at DC24V and rated output

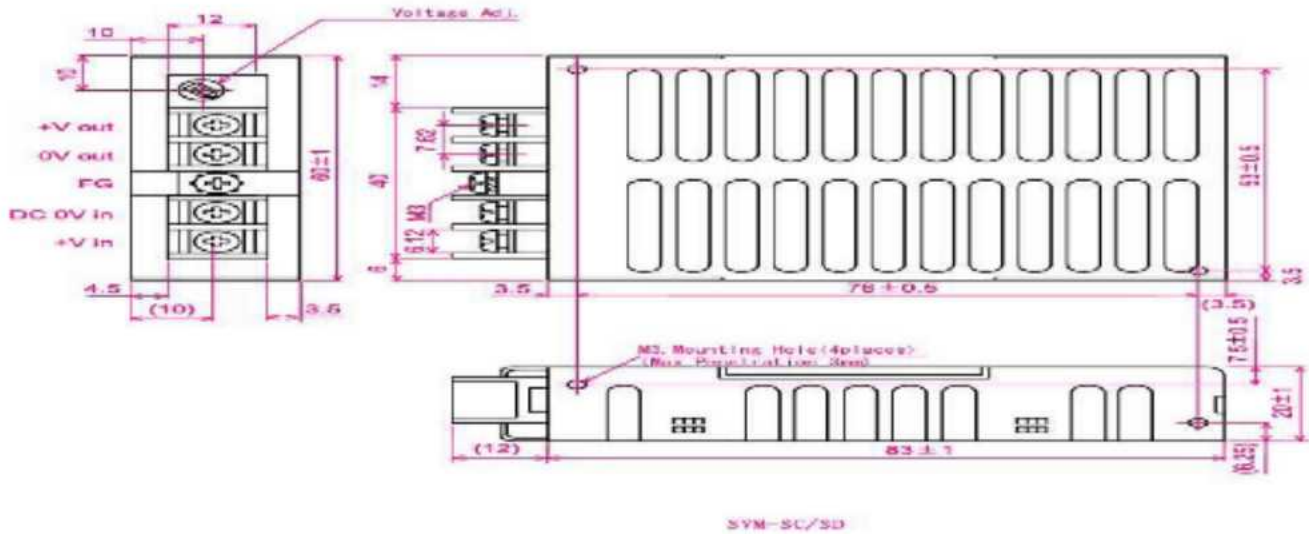
*2 measured by a bayonet probe at the output connector at a 0 to 100MHz bandwidth

*3 at 0 to +50°C

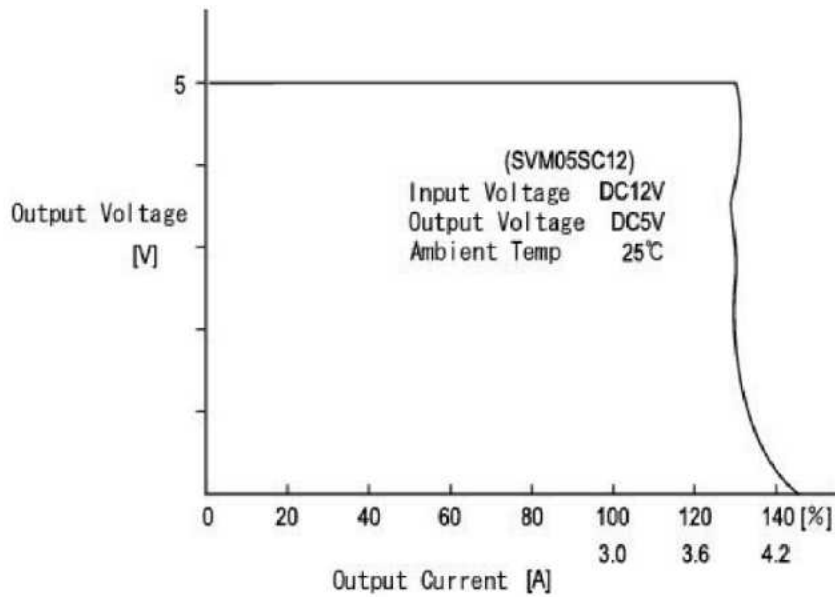
*4 for 7hours from 1hour after switch-on at 25°Cand rated input/output

*5 when output current changed from 25% to 75% of rated output current rapidly at DC24V input

Dimension Diagram



OCP Curve



15 WATT DC-DC CONVERTER

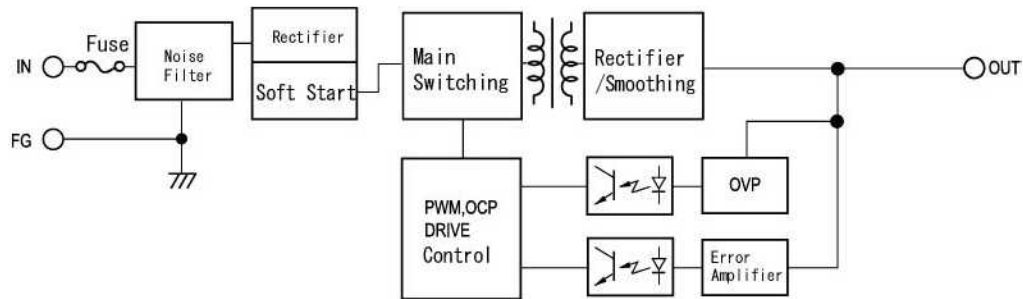
**SVM-SC48
SINGLE CHANNEL**

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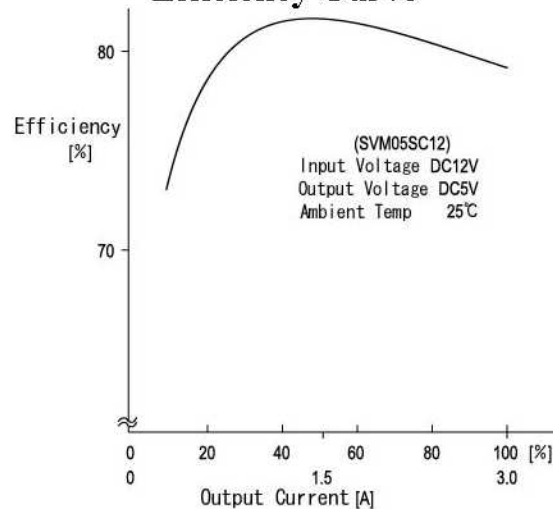


Specifications	Model				
SVM**SC48 15WATTS/1 OUTPUT	SVM05SC48	SVM12SC48	SVM15SC48	SVM24SC48	SVM48SC48
Input Characteristic					
Input Voltage	DC48V				
Input Range	DC38-63V				
Inrush Current	Not specified				
Efficiency [%] (typical) *1	81	83	84	86	86

Block Diagram



Efficiency Curve



Specifications	Model				
	SVM05SC48	SVM12SC48	SVM15SC48	SVM24SC48	SVM48SC48
SVM**SC48 15WATTS/1 OUTPUT					
Output Voltage [V]	5	12	15	24	48
Output Current [A]	3.0	1.3	1.0	0.7	0.35
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
Regulation					
a.Statistic Line Regulation [mV](maximum)	40	96	120	192	384
b.Statistic Load Regulation [mV](maximum)	45	108	135	216	432
c.Temperature Coefficient *3	0.03%/°C				
d.Drift[mV](maximum) *4	40	75	90	135	255
e.Dynamic Load Regulation [mV](typical) *5	150	360	450	720	1440
f.Recovery Time *5	0.3mS(typical)				
Rise up time	500mS(maximum) at 25°Cand rated input/output				
Hold up time	Not specified				
Functions					
Overcurrent Protection	Current Limiting with automatic recovery				
≥ 10% of Rated Output [A]	3.30	1.43	1.10	0.77	0.39
Overvoltage Protection	Output shutdown(to reset,leave 1minute after shutdown)				
≥ 10% 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				
Environmental					
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 ² ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)				
Shock	294m/s ²				
Cooling	Convection				
? Line Conduction Noise	Not specified				
? Safety	-				
? Weight (typical)	120g				
? MTBF [H]	750,000				
? Switching Frequency[kHz](typical)	90 Fix.	90 Fix.	90 Fix.	90 Fix.	90 Fix.

Conditions:

*1 at DC48V and rated output

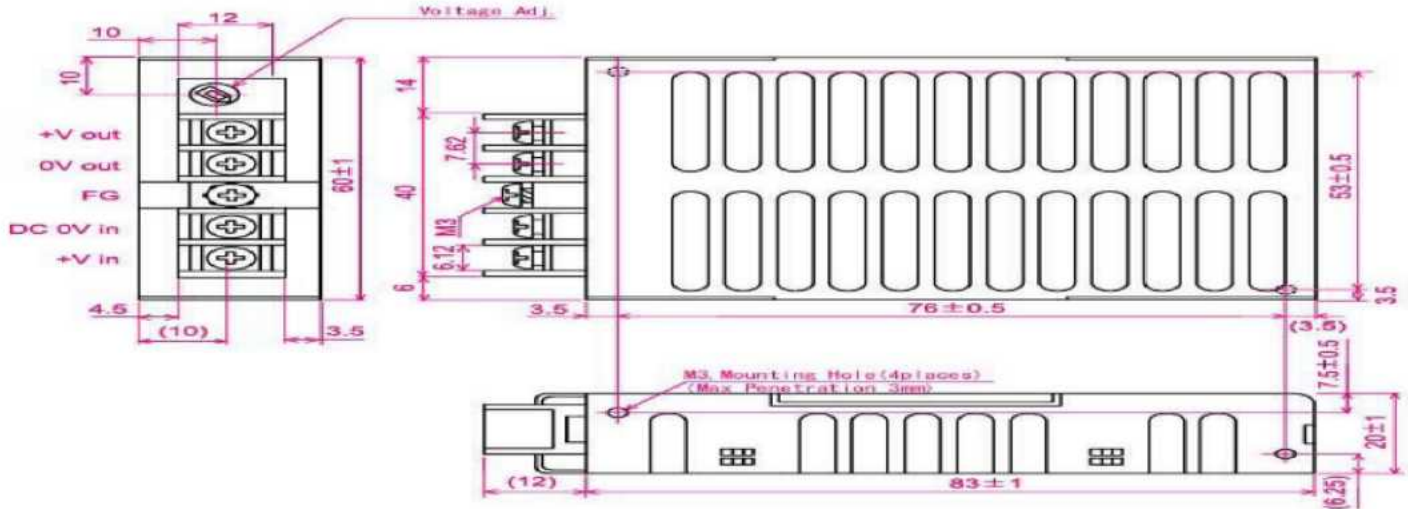
*2 measured by a bayonet probe at the output connector at a 0 to 100MHz bandwidth

*3 at 0 to +50°C

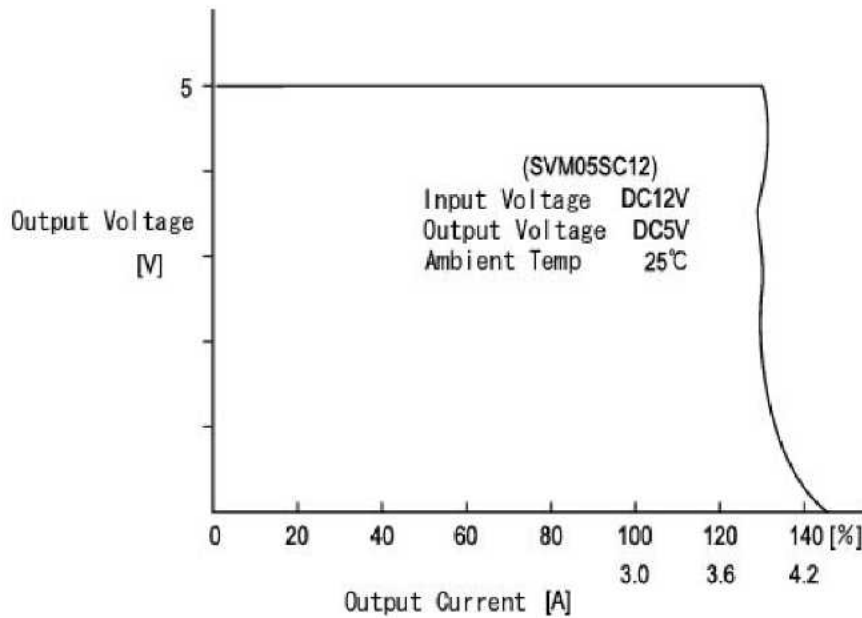
*4 for 7hours from 1hour after switch-on at 25°Cand rated input/output

*5 when output current changed from 25% to 75% of rated output current rapidly at DC48V input

Dimension Diagram



OCP Curve



15 WATT DC-DC CONVERTER

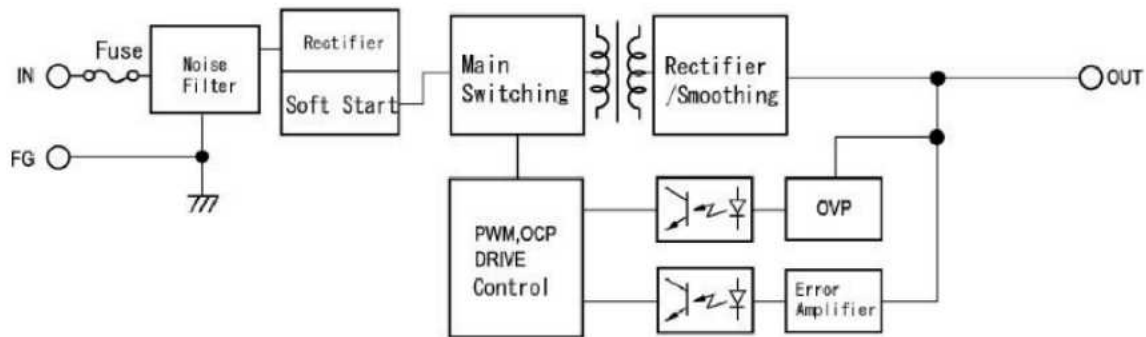
**SVM-SD
SINGLE CHANNEL**

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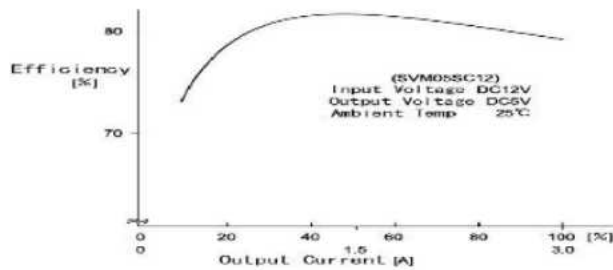


Specifications	Model				
SVM**SD 15WATTS/1 OUTPUT	SVM05SD	SVM12SD	SVM15SD	SVM24SD	SVM48SD
Input Characteristic					
Input Voltage	DC110V				
Input Range	DC85-140V				
Inrush Current *1	20A (maximum) at DC110V				
Efficiency [%] (typical) *2	81	83	84	86	86

Block Diagram

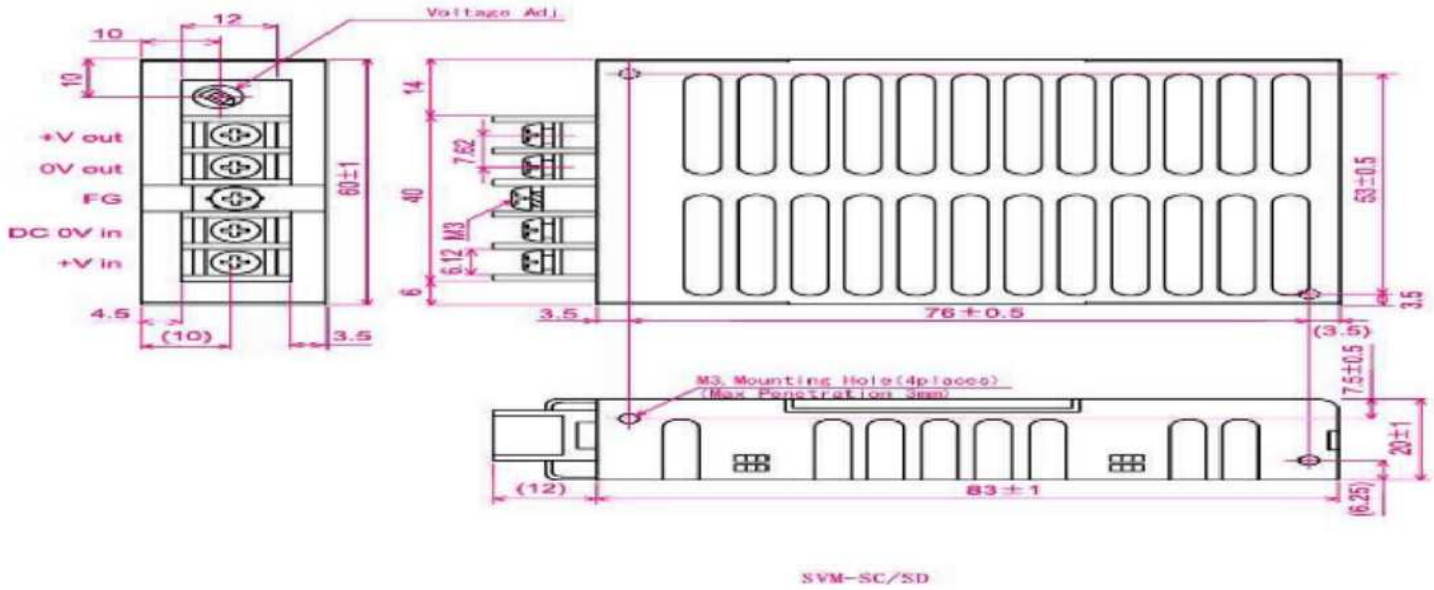


Efficiency Curve



Specifications	Model				
	SVM05SD	SVM12SD	SVM15SD	SVM24SD	SVM48SD
SVM**SD 15WATTS/1 OUTPUT					
Output Voltage [V]	5	12	15	24	48
Output Current [A]	3.0	1.3	1.0	0.7	0.35
Voltage Adjust Range	+/-10% of Rated Output Voltage(at no load within input range)				
Ripple and Noise [mVp-p](maximum) *3	150	220	250	340	580
Regulation					
a.Statistic Line Regulation [mV](maximum)	40	96	120	192	384
b.Statistic Load Regulation [mV](maximum)	45	108	135	216	432
c.Temperature Coefficient *4	0.03%/°C				
d.Drift[mV](maximum) *5	40	75	90	135	255
e.Dynamic Load Regulation [mV](typical) *6	150	360	450	720	1440
f.Recovery Time *6	0.3mS(typical)				
Rise up time	500mS(maximum) at 25°Cand rated input/output				
Hold up time	Not specified				
Functions					
Overcurrent Protection	Current Limiting with automatic recovery				
≥10% of Rated Output [A]	3.30	1.43	1.10	0.77	0.39
Overvoltage Protection	Output shutdown(to reset,leave 1minute after shutdown)				
≥10% 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 bridge diode				
Environmental					
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 ² ,20minutes' period for 60minutes each along X,Y,Z axes(non-operating)				
Shock	294m/s ²				
Cooling	Convection				
Line Conduction Noise	Not specified				
Safety	-				
Weight (typical)	120g				
MTBF [H]	600,000				
Switching Frequency[kHz](typical)	90 Fix.	90 Fix.	90 Fix.	90 Fix.	90 Fix.

Dimension Diagram



OCP Curve

