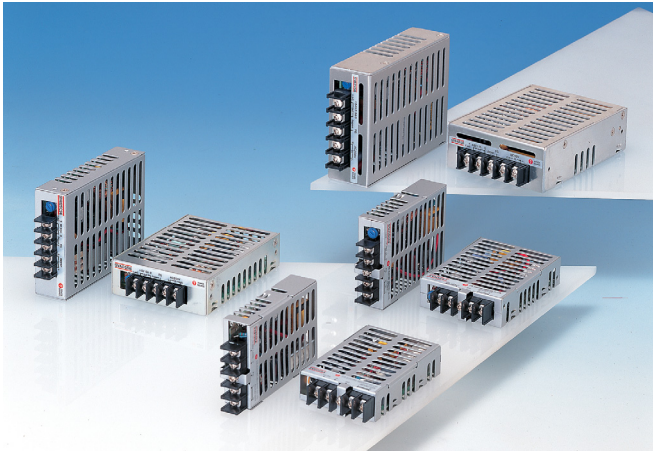


# 15 WATT AC-DC CONVERTER

## SVM-SA SINGLE CHANNEL



### General Description

The SV-series has been developed to follow ETA's philosophy of "Miniaturization and high efficiency" of power supplies. There are two inputs available: SVM.-SA is designed for 100VAC; SVM-.SB is usable with 200VAC. The small size and high efficiency are suitable for many applications, especially small equipment.

### Application

Industrial

### Input

**Input Voltage:** AC85-132V

**Efficiency:** 77%

### 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

### Options

Specifications<AC/DC>	Model				
<b>SVM**SA</b> <b>15WATTS/SINGLE</b>	SVM05SA	SVM12SA	SVM15SA	SVM24SA	SVM48SA
<b>Input Characteristic</b>					
Input Voltage	AC100V				
Input Range	AC85-132V(DC110-175V)				
Input Frequency	50/60Hz				
Input Frequency Range	47-440Hz				
Phase	Single				
Inrush Current *1	20A(maximum)at AC100V				
Efficiency [%] (typical) *2	80	81	82	84	84

Specifications<AC/DC>	Model				
SVM**SA 15WATTS/SINGLE	SVM05SA	SVM12SA	SVM15SA	SVM24SA	SVM48SA
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 the 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	45	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	10mS(minimum) at 25°Cand rated input/output				
Functions					
Overcurrent Protection $\geq 10\%$ of Rated Output Current[A]	Current Limiting with automatic recovery				
	3.30	1.43	1.10	0.77	0.39
Overvoltage Protection $\geq 10\%$ of Rated Output Voltage[V]	output shutdown(to reset,leave 1minute after shut-off)				
	5.50	13.2	16.5	26.4	52.8
Remote Sense	not available				
Remote On/Off	not available				
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 AC1,500V for 1minute Primary-Frame Ground AC1,500V 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				
Leakage Current	1mA(maximum) at 25°Crated input/output and rated input frequency				
Safety					
Weight (typical)	120g				
MTBF [H]	630,000				
Switching Frequency[kHz](typical)	140				

Conditions:

\*1 at cold start

\*2 at DC130V input and rated output

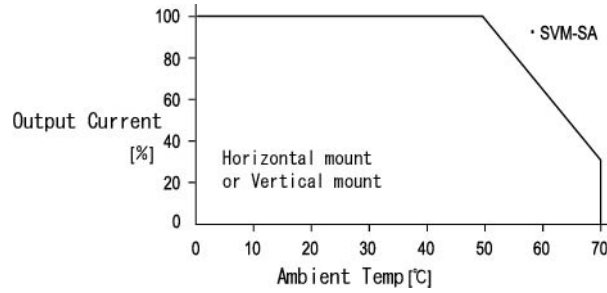
\*3 measured by a bayonet probe at output connector at 0 to 100MHz bandwidth

\*4 at 0 to +50°C

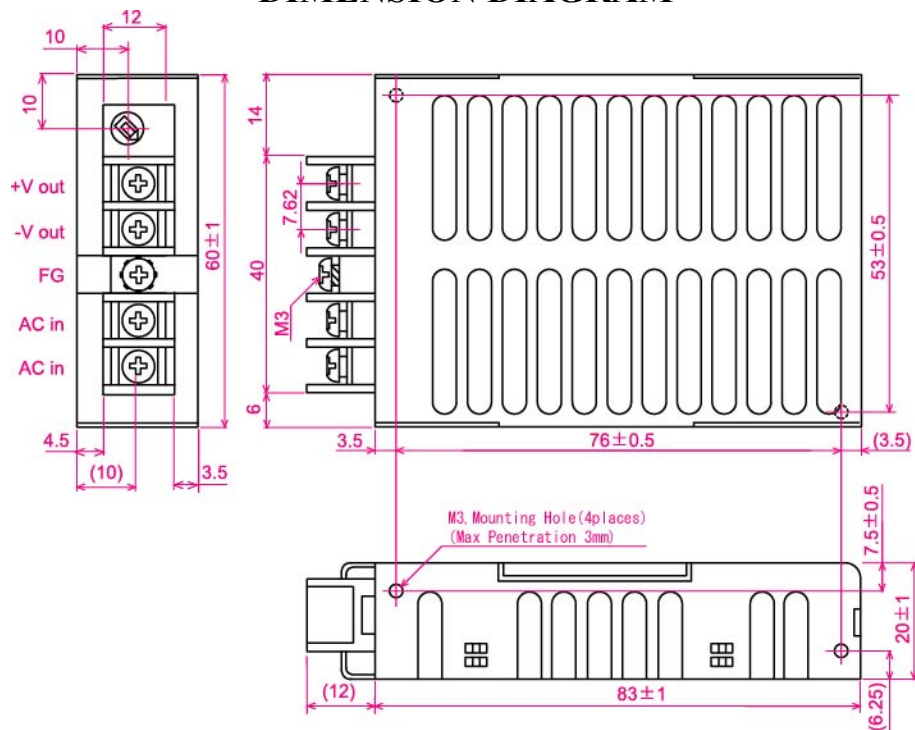
\*5 for 7hour period after 1hour warm-up at 25°Cand rated input/output

\*6 when output current changed from 25% to 75% of rated output current rapidly at AC100V input

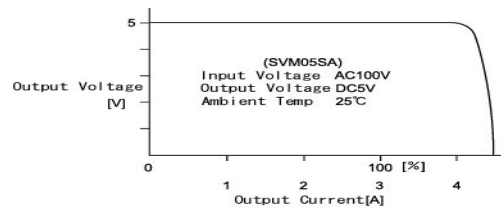
### DERATING CURVE



### DIMENSION DIAGRAM



## OCP CURVE



SVM05SA

## BLOCK DIAGRAM

