



# SUPERWORLD ELECTRONICS

## SW1 EHISM Series – 1W High Isolation 3kVdc Surface Mount DC-DC Converter



RoHS Compliant



### FEATURES

- 3kVdc Isolated Single & Dual Outputs
- Higher 1W power in smaller package
- Low Cost, High Performance
- Industry standard 14-pin SMD device
- Operating Temp Range -40°C to 85°C
- 2 Year Warranty
- Internal Input and Output Filtering

### DESCRIPTION

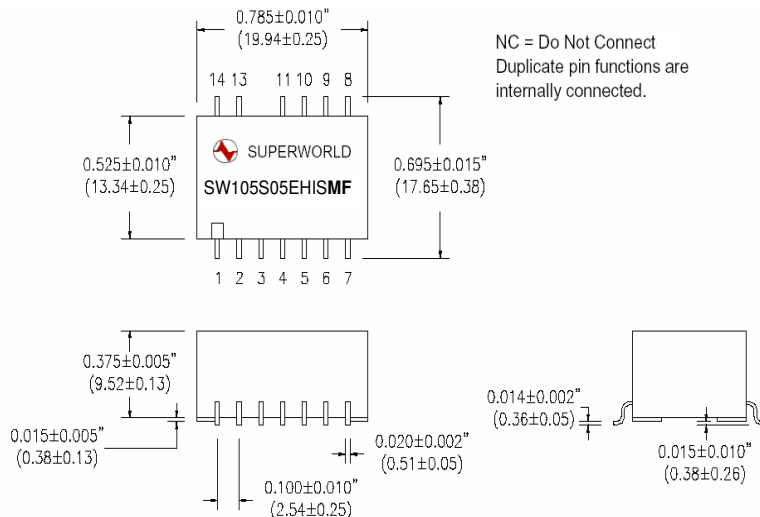
The SW1 EHISM Series is a smaller industry standard SMD package, making it very suitable for high volume production. The package (19.9 x 13.5 x 9.5 mm) is fully encapsulated in a non-flammable plastic case (meeting UL 94V-0) and is designed to meet EN60950 and UL1950 safety standards. As outputs are fully isolated to 3kVdc from the input, a variety of grounding and polarity configurations are available, for the most challenging applications.

### SW1 EHISM PRODUCT RANGE

Model	V <sub>in</sub> (nom) (Vdc)	V <sub>out</sub> (Vdc)	I <sub>out</sub> (mA)	I <sub>in</sub> (rated load) (mA)	Eff. (%)
SW105S05EHISMF	5	5	200	290	69
SW105S12EHISMF	5	12	83	285	70
SW105S15EHISMF	5	15	67	283	71
SW105D05EHISMF	5	± 5	± 100	294	68
SW105D12EHISMF	5	± 12	± 42	296	68
SW105D15EHISMF	5	± 15	± 34	291	70
SW112S05EHISMF	12	5	200	116	72
SW112S12EHISMF	12	12	83	115	72
SW112S15EHISMF	12	15	67	116	72
SW112D05EHISMF	12	± 5	± 100	117	71
SW112D12EHISMF	12	± 12	± 42	120	70
SW112D15EHISMF	12	± 15	± 34	118	72
SW115S05EHISMF	15	5	200	97	69
SW115S12EHISMF	15	12	83	96	69
SW115S15EHISMF	15	15	67	97	69
SW115D05EHISMF	15	± 5	± 100	97	69
SW115D12EHISMF	15	± 12	± 42	93	72
SW115D15EHISMF	15	± 15	± 34	94	72
SW124S05EHISMF	24	5	200	60	69
SW124S12EHISMF	24	12	83	60	69
SW124S15EHISMF	24	15	67	61	69
SW124D05EHISMF	24	± 5	± 100	60	69
SW124D12EHISMF	24	± 12	± 42	61	69
SW124D15EHISMF	24	± 15	± 34	62	69

### MECHANICAL SPECIFICATIONS

Pin	Function (SINGLE)	Function (DUAL)
1	+Vin	+Vin
2	-Vin	-Vin
3	NC	NC
4	NC	NC
5	-Vout	-Vout
6	NC	Common
7	+Vout	+Vout
8	NC	NC
9	NC	NC
10	NC	NC
11	NC	NC
13	NC	NC
14	NC	NC



SW1 EHISM INPUT SPECIFICATIONS					
PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
Input Current (No Load)	5 Vin models		33		mA
	12 Vin models		18		
	15 Vin models		15		
	24 Vin models		12		
Voltage Range	5 Vin models	4.5	5	5.5	Vdc
	12 Vin models	10.8	12	13.2	
	15 Vin models	13.5	15	16.5	
	24 Vin models	21.5	24	26.5	

SW1 EHISM OUTPUT SPECIFICATIONS					
PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
Rated Power	All models			0.75	W
Voltage Setpoint Accuracy			± 5		%
Line Regulation	1% change in Vin		1.0	1.2	%
Load Regulation (10% load to rated load)	5Vout		5	10	%
	12 & 15 Vout		3	10	%
Ripple & Noise	BW = DC to 20MHz All models		40	90	mVp-p
Maximum Voltage (1 mA load)	5 Vout models			7	Vdc
	12 Vout models			15	
	15 Vout models			18	
Temperature Coefficient			± 0.01		%/°C
Capacitive Load				10	μF
Short Circuit Protection				1	second

SW1 EHISM GENERAL CHARACTERISTICS					
PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
Temperature	Specification (5&12V input)	-40	--	85	°C
	Specification (15&24V input)	-40	--	70	°C
	Storage	-40	--	110	°C
Isolation	Isolation Test Voltage	750			Vdc
	Resistance	1	10		GΩ
	Capacitance		25	100	pF
	Leakage Current		2	8.5	μArms
Switching Frequency			120		kHz
MTTF (Ta = 25 °C)	MIL-HDBK-217E		450000		hrs
Weight			1.8		g

Refer to Low Power Application Note 1 for additional Performance Curves & Data

## CONTACT INFORMATION

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