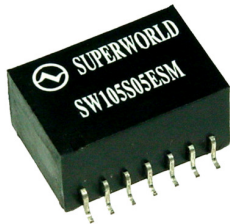




SW1 ESM Series – 1W Single & Dual Surface Mount DC-DC Converter



RoHS Compliant



FEATURES

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

DESCRIPTION

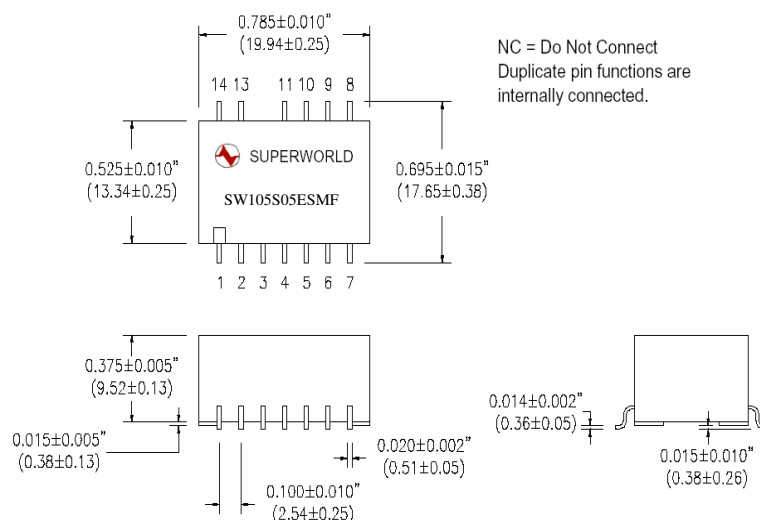
The SW1 ESM Series is 1W packaged in a smaller industry standard SMD package, making it very suitable for high volume production. The package (19.9 x 13.5 x 9.5 mm) is fully encapsulated in a non-flammable plastic case (meeting UL 94V-0) and is designed to meet EN60950 and UL1950 safety standards. As outputs are fully isolated from the input, a variety of grounding and polarity configurations are available.

SW1 ESM PRODUCT RANGE

Model	Vin (nom) (Vdc)	Vout (Vdc)	Iout (mA)	Iin (rated load) (mA)	Eff. (%)
SW105S05ESMF	5	5	200	290	69
SW105S12ESMF	5	12	83	285	70
SW105S15ESMF	5	15	67	283	71
SW105D05ESMF	5	± 5	± 100	294	68
SW105D12ESMF	5	± 12	± 42	296	68
SW105D15ESMF	5	± 15	± 34	291	70
SW112S05ESMF	12	5	200	116	72
SW112S12ESMF	12	12	83	115	72
SW112S15ESMF	12	15	67	116	72
SW112D05ESMF	12	± 5	± 100	117	71
SW112D12ESMF	12	± 12	± 42	120	70
SW112D15ESMF	12	± 15	± 34	118	72
SW115S05ESMF	15	5	200	97	69
SW115S12ESMF	15	12	83	96	69
SW115S15ESMF	15	15	67	97	69
SW115D05ESMF	15	± 5	± 100	97	69
SW115D12ESMF	15	± 12	± 42	93	72
SW115D15ESMF	15	± 15	± 34	94	72
SW124S05ESMF	24	5	200	60	69
SW124S12ESMF	24	12	83	60	69
SW124S15ESMF	24	15	67	61	69
SW124D05ESMF	24	± 5	± 100	60	69
SW124D12ESMF	24	± 12	± 42	61	69
SW124D15ESMF	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 ESM 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 ESM 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 ESM 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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