



Functional Description

The FSM1S series of unregulated 1W single DC/DC converters feature industry standard pinout in an SMD package with a minimum isolation voltage of 1000Vdc (3000Vdc optional), maximum efficiency of 80% and operating temperature range from -40°C to +85°C.

Electrical Specifications: Unregulated

INPUT SPECIFICATIONS

Measured at 25°C with the condition of V_{IN} = Nominal and Full Load. Specifications subject to change without notice.

PARAMETER	CONDITION / NOTE	MIN	TYP	MAX	UNIT
Input Voltage Range	V_{IN} Nominal $\pm 10\%$; See Model Selection Guide				
Input Filter	Capacitor				

OUTPUT SPECIFICATIONS

PARAMETER	CONDITION / NOTE	MIN	TYP	MAX	UNIT
Output Voltage	See Model Selection Guide				
Output Current	See Model Selection Guide				
Output Voltage Accuracy				± 5	%
Ripple & Noise	@20MHz BW			100	mV _{PP}
Line Regulation	Minimum V_{IN} to maximum V_{IN}		1.2%		per 1% of V_{IN}
Load Regulation, 5V _{OUT}	10% FL to FL			15	%
Load Regulation, 9, 12, 15V _{OUT}	10% FL to FL			10	%
Short Circuit Protection			1		sec

GENERAL SPECIFICATIONS

PARAMETER	CONDITION / NOTE	MIN	TYP	MAX	UNIT
Efficiency @ FL	See Model Selection Guide				
Isolation Voltage, Input to Output		1000			Vdc
Isolation Resistance			10		GΩ
Isolation Capacitance			45		pF

ENVIRONMENTAL SPECIFICATIONS

PARAMETER	CONDITION / NOTE	MIN	TYP	MAX	UNIT
Operating Temperature Range	Ambient	-40		+85	°C
Storage Temperature Range		-55		+125	°C

PHYSICAL CHARACTERISTICS

PARAMETER	CONDITION / NOTE	MIN	TYP	MAX	UNIT
Dimensions (L×W×H)	0.50×0.32×0.28 in. (12.75×8.15×7.00mm)				
Weight	0.053 oz. (1.5g)				

MODEL SELECTION GUIDE (Insert $\pm$ after Model Number for 3000Vdc minimum Isolation Voltage) *Contact factory for 3.3Vdc Input Voltage

MODEL NUMBER	OUTPUT VOLTAGE (Vdc)	OUTPUT CURRENT (mA)	INPUT VOLTAGE* (Vdc)	EFFICIENCY (%)
FSM1S3.3/XX	3.3	300	3.3, 5, 9, 12, 15, 24	70
FSM1S5/XX	5	200	3.3, 5, 9, 12, 15, 24	70
FSM1S9/XX	9	111	3.3, 5, 9, 12, 15, 24	75
FSM1S12/XX	12	84	3.3, 5, 9, 12, 15, 24	78
FSM1S15/XX	15	66	3.3, 5, 9, 12, 15, 24	80
FSM1S24/XX	24	42	3.3, 5, 9, 12, 15, 24	80

Mechanical Specifications

XX - Denotes Input Voltage

Reflow Temp = 245°C (30 sec.)

Pin	Function
1	-V _{IN} (GND)
2	+V _{IN}
4	-V _{OUT}
5	+V _{OUT}
8	NC

