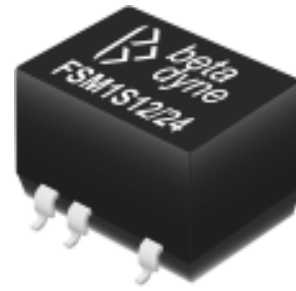




# FSM1S

## 1W SINGLE DC/DC CONVERTER



### 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				$\pm 5$	%
Ripple & Noise	@20MHz BW			100	mV <sub>PP</sub>
Line Regulation	Minimum $V_{IN}$ to maximum $V_{IN}$		1.2%		per 1% of $V_{IN}$
Load Regulation, 5V <sub>OUT</sub>	10% FL to FL			15	%
Load Regulation, 9, 12, 15V <sub>OUT</sub>	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 (LxWxH)	0.50x0.32x0.28 in. (12.75x8.15x7.00mm)				
Weight	0.053 oz. (1.5g)				

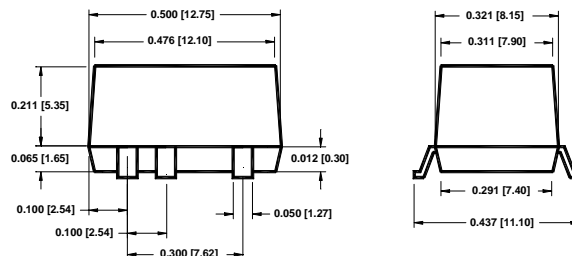
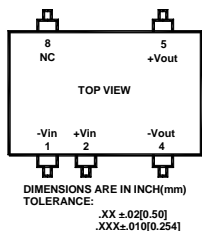
#### MODEL SELECTION GUIDE (Insert X after Model Number for 3000Vdc minimum Isolation Voltage)

\*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	68
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

Reflow Temp = 280°C (10 sec.)



Pin	Function
1	-V <sub>IN</sub> (GND)
2	+V <sub>IN</sub>
4	-V <sub>OUT</sub>
5	+V <sub>OUT</sub>
8	NC