

**1. Features :**

<ul style="list-style-type: none"> <li>■ Lead frame &amp; injection Technology</li> </ul>	
<ul style="list-style-type: none"> <li>■ High Efficiency up to 83 %</li> </ul>	
<ul style="list-style-type: none"> <li>■ Input / Output isolation 1000 Vdc</li> </ul>	
<ul style="list-style-type: none"> <li>■ 100 % Burn-In</li> </ul>	
<ul style="list-style-type: none"> <li>■ Input Filter with Internal Capacitor</li> </ul>	
<ul style="list-style-type: none"> <li>■ Custom Design Available</li> </ul>	

**2. Absolute maximum ratings :**

( Exceeding these values may damage the module. These are not continuous operating ratings )

Parameter	Condition	Min.	Typ.	Max.	Unit
Input <b>Absolute</b> Voltage Range	5V Input Model	-0.7	5	7.5	Vdc
	12V Input Model	-0.7	12	15	
Max. Output power		---	---	1.0	W
Output Short circuit duration		---	---	1.0	Second
Operating temperature	Output Full Load	-40	---	+85	°C
Storage temperature		-55	---	+125	
Lead Temperature 1.5 mm from case for 10 seconds		---	---	+300	

**3. Nominal Input / Output Electrical Specifications :**

( Specifications typical at Ta = +25°C , nominal input voltage, rated output current unless otherwise noted )

Parameter	Condition	Min.	Typ.	Max.	Unit
Input Voltage Range	5V Input Model	4.5	5	5.5	Vdc
	12V Input Model	10.8	12	13.2	
Output Voltage Accuracy	Nominal Input	---	1.0	3.0	%
Output Voltage Balance		---	---	± 1.0	
Switching Frequency		70	100	150	KHz
Temperature Coefficient		---	± 0.01	± 0.02	% / °C
Isolation Voltage	60 Seconds / 0.5mA	1000	---	---	Vdc
Isolation Resistance	500 Vdc	1000	---	---	MΩ
Isolation Capacitance	5V Input Model	8	15	20	pF
	12V Input Model	10	25	30	
Max. Line Regulation (Per 1.0% change in input change)		---	---	1.3	%

### 4. Model Selection Guide :

( Specifications typical at Ta = +25 °C, Nominal input voltage, Rated output current unless otherwise noted )

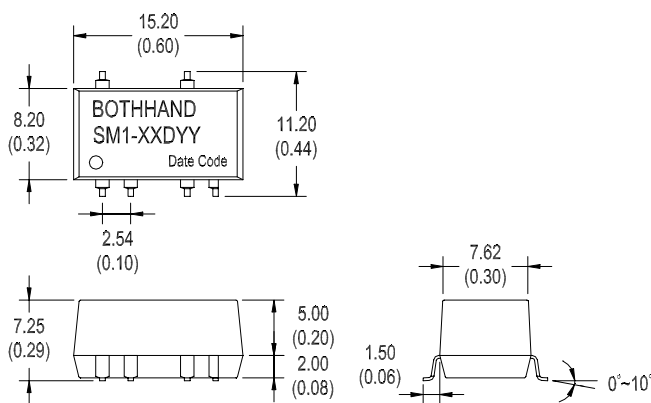
Bothhand Model No.	Input Voltage (Vdc)	Each O/P Voltage (Vdc)	O/P Current (mA) Max.	I in @ No Load (mA) Typ.	I in @ Max. Load (mA) Typ.	Max. O/P Ripple (mV)	Load Regulation (%) Max.	Efficiency (%) Typ.
SM1-05D05	5	5	± 100	30	277.8	70	12	72
SM1-05D09		9	± 56	26	255	70	12	79
SM1-05D12		12	± 42	27	252	90	10	80
SM1-05D15		15	± 34	28	248	90	10	82
SM1-12D05	12	5	± 100	18	112.6	70	12	74
SM1-12D09		9	± 56	18	105	70	12	80
SM1-12D12		12	± 42	18	103.7	90	10	81
SM1-12D15		15	± 34	18	102.4	90	10	83

Notes :

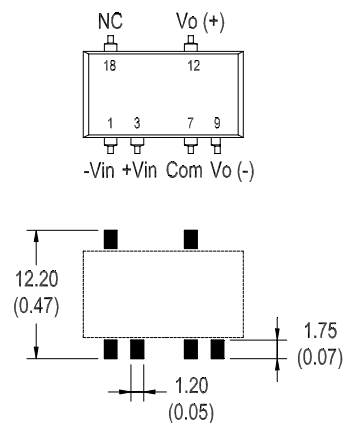
1. Load regulation is for output current change from 20 % to 100 % Max. Load.

### Mechanical & Pin Connections :

#### (1). Detail Dimension



#### (2). Recommended footprint detail



Units : mm ( inch )

Tolerance : .xx ± 0.25

( ± 0.01 )

Top View