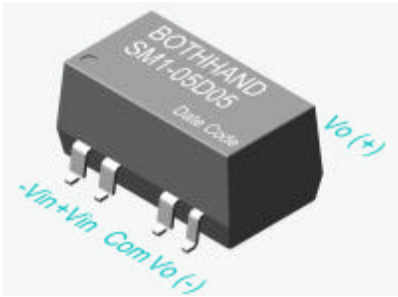


1. Features :

■ Lead frame & injection Technology	
■ High Efficiency up to 83 %	
■ Input / Output isolation 1000 Vdc	
■ 100 % Burn-In	
■ Input Filter with Internal Capacitor	
■ Custom Design Available	

2. Absolute maximum ratings

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

Parameter	Condition	Min.	Typ.	Max.	Unit
Input Absolute 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	Deg
Storage temperature		-55	---	+150	
Lead Temperature 1.5 mm from case for 10 seconds		---	---	+300	
Peak reflow temperature with CECC 00802 profile		---	---	+280	

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	% / °
Isolation Voltage	60 Seconds	1000	---	---	Vdc
Isolation Resistance	500 Vdc	1000	---	---	M?
Isolation Capacitance	5V Input Model	8	15	20	pF
	12V Input Model	7	18	24	
Max. Line Regulation (Per 1.0% change in input change)		---	---	1.2	%

4. Model Selection Guide :

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

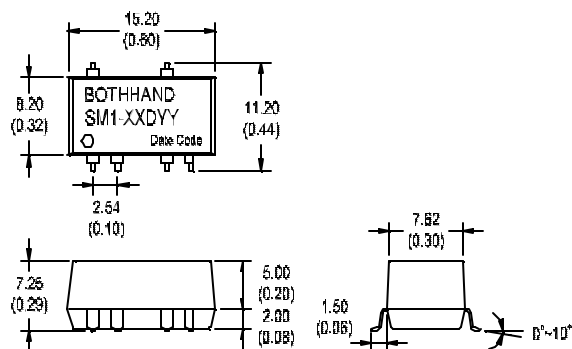
Bothhand Model No.	Input Voltage (Vdc)	Each O/P Voltage (Vdc)	O/P Current (mA) Max.	I in @ No Load (mA) Typ.	I in @ Max. Load (mA) Typ.	Max. O/P Ripple (mV)	Load Regulation (%) Max.	Efficiency (%) Typ.
SM1-05D05	5	5	± 100	28	281	50	12	71
SM1-05D09		9	± 56	24	256	50	12	78
SM1-05D12		12	± 42	24	258	50	10	78
SM1-05D15		15	± 34	26	252	50	10	81
SM1-12D05	12	5	± 100	15	114	50	12	73
SM1-12D09		9	± 56	15	106	50	12	79
SM1-12D12		12	± 42	15	103.7	50	10	81
SM1-12D15		15	± 34	15	102.4	50	10	83

Notes :

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

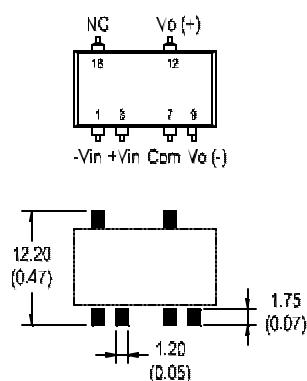
Mechanical & Pin Connections:

(1). Detail Dimension



Units : mm (inch)
Tolerance : .xx ± 0.25
(± 0.01)

(2). Recommended footprint detail



Top View