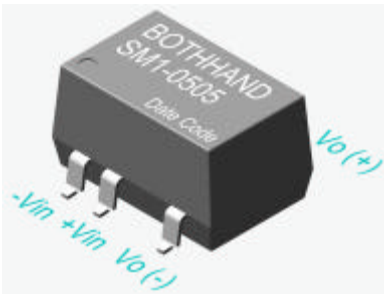


1. Features :

■ 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	%
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	14	20	pF
	12V Input Model	6	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)

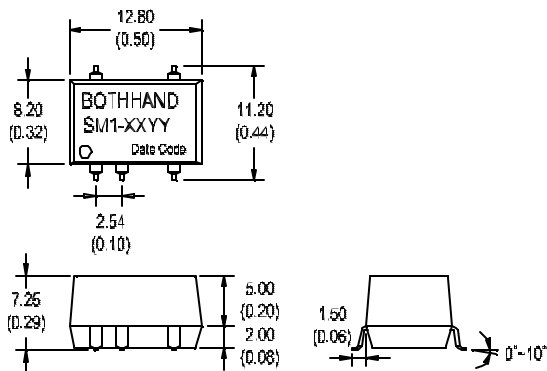
Bothhand Model No.	Input Voltage (Vdc)	Output Voltage (Vdc)	Max. Output Current (mA)	Input Current @ No Load (mA) Typ.	Input Current @ Max. Load (mA) Typ.	Max. Output Ripple (mV)	Load Regulation (%) Max.	Efficiency (%) Typ.
SM1-0503	5	3.3	200	22	171	50	12	77
SM1-0505		5	200	25	246	50	10	81
SM1-0509		9	110	23	253.8	50	10	78
SM1-0512		12	84	25	252	50	8	80
SM1-0515		15	67	28	248	50	8	81
SM1-1203	12	3.3	200	12	73	50	12	75
SM1-1205		5	200	15	100	50	8	81
SM1-1209		9	110	15	105	50	8	78
SM1-1212		12	84	15	103	50	6	81
SM1-1215		15	67	14	100	50	6	83

Notes :

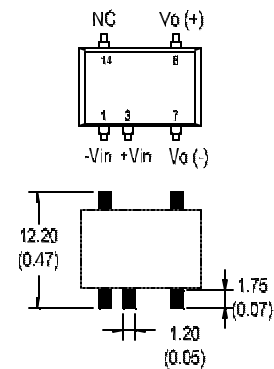
1. Load regulation is for output current change from 20 % to 100 % Max. Load.

Mechanical Dimension :

(1). Detail Dimension



(2). Recommended footprint detail



Top View

Units : mm (inch)

Tolerance : .xx ± 0.25

(± 0.01)