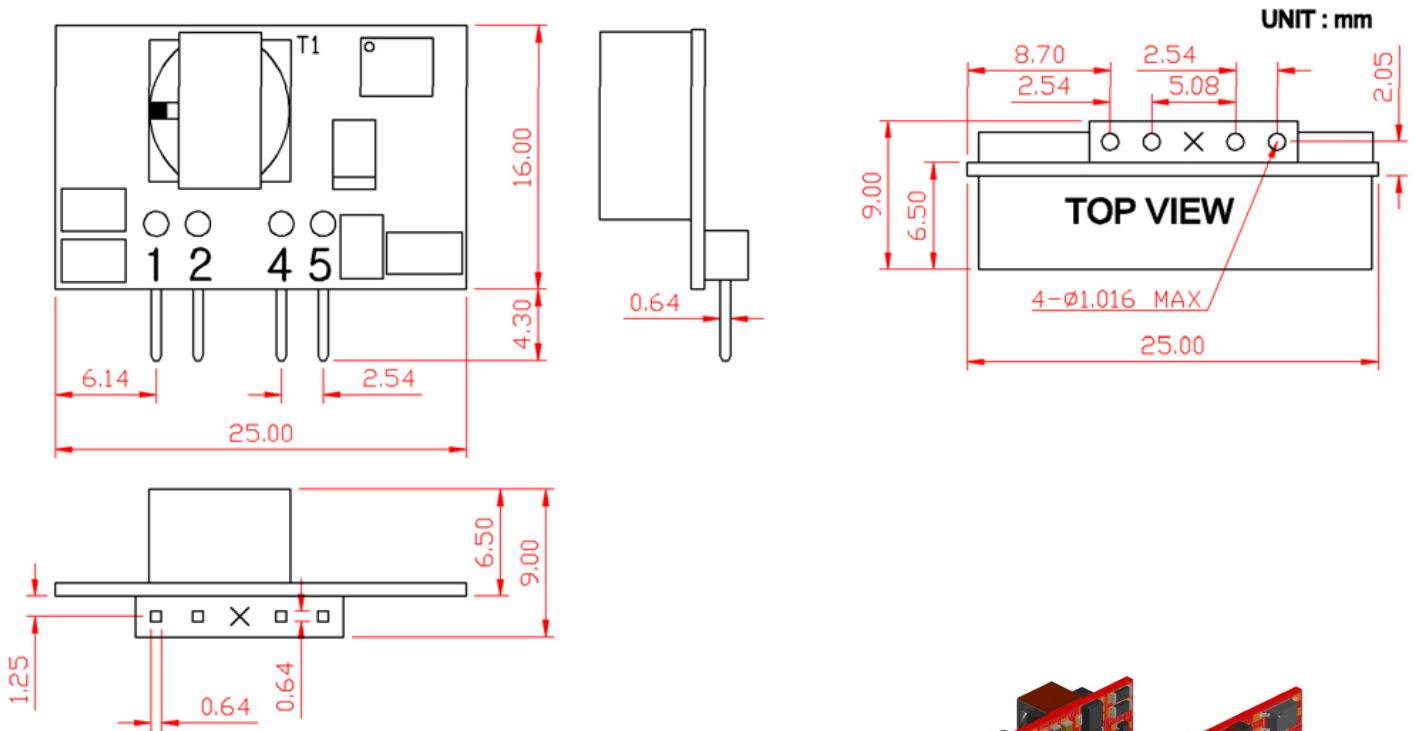


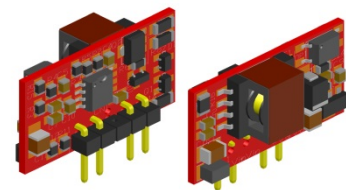
VS1R5 - Series 1W (SINGLE OUTPUT) DC-DC CONVERTER / PCB on-board type

It is vertical type.
 It is small and light.
 It is convenient to install in the narrow space. (1.5W,3.0W)

버티컬 타입 입니다.
 작고 가볍습니다.
 좁은 공간에 장착하기에 편리 합니다. (1.5W,3.0W)



VS1R5				
INPUT			OUTPUT	
1	2	3	4	5
-Vin	+Vin	X	-Vo	+Vo



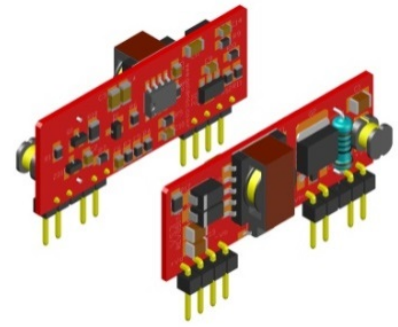
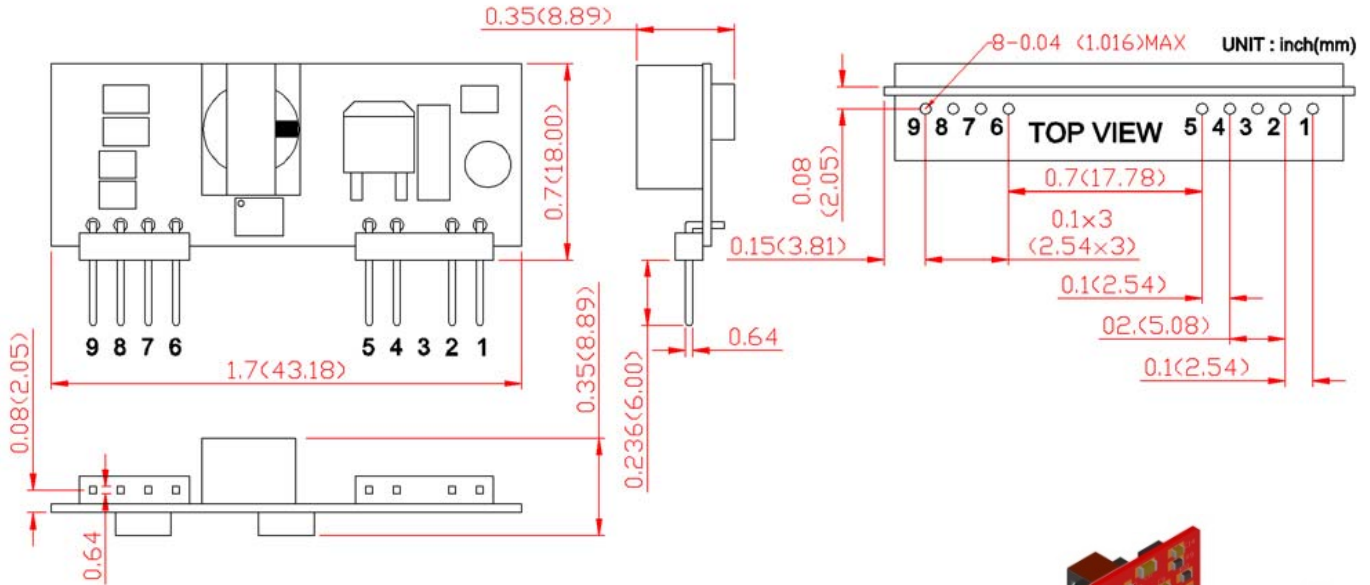
VS1R5
25x16xT9mm

(25x16x T9mm) VS1R5- Series 1.5W (Single Output) SPECIFICATION						
Model	Input Range	V-out	I-out	P-out	Efficiency	
VS1R5-5-033	4.6~7.2 VDC	3.3V	0.3A	1.0W	66%	
VS1R5-5-05	4.6~7.2 VDC	5V	0.2A	1.0W	66%	
VS1R5-5-12	4.6~7.2 VDC	12V	0.08A	1.0W	66%	
VS1R5-12-033	9~18 VDC	3.3V	0.3A	1.0W	67%	
VS1R5-12-05	9~18 VDC	5V	0.3A	1.5W	67%	
VS1R5-12-12	9~18 VDC	12V	0.12A	1.5W	68%	
VS1R5-24-033	18~36 VDC	3.3V	0.3A	1.0W	70%	
VS1R5-24-05	18~36 VDC	5V	0.3A	1.5W	70%	
VS1R5-24-12	18~36 VDC	12V	0.12A	1.5W	74%	

VS3 - Series 3W (SINGLE OUTPUT) DC-DC CONVERTER / PCB on-board type

It is vertical type.
 It is small and light.
 It is convenient to install in the narrow space. (1.5W,3.0W)

버티컬 타입 입니다.
 작고 가볍습니다.
 좁은 공간에 장착하기에 편리 합니다. (1.5W,3.0W)



VS3
43x18x T9mm

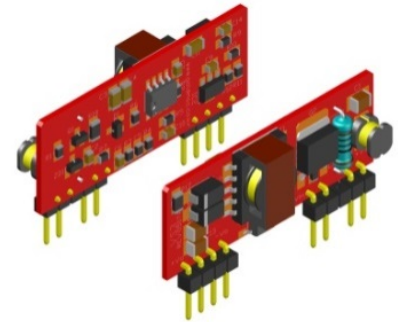
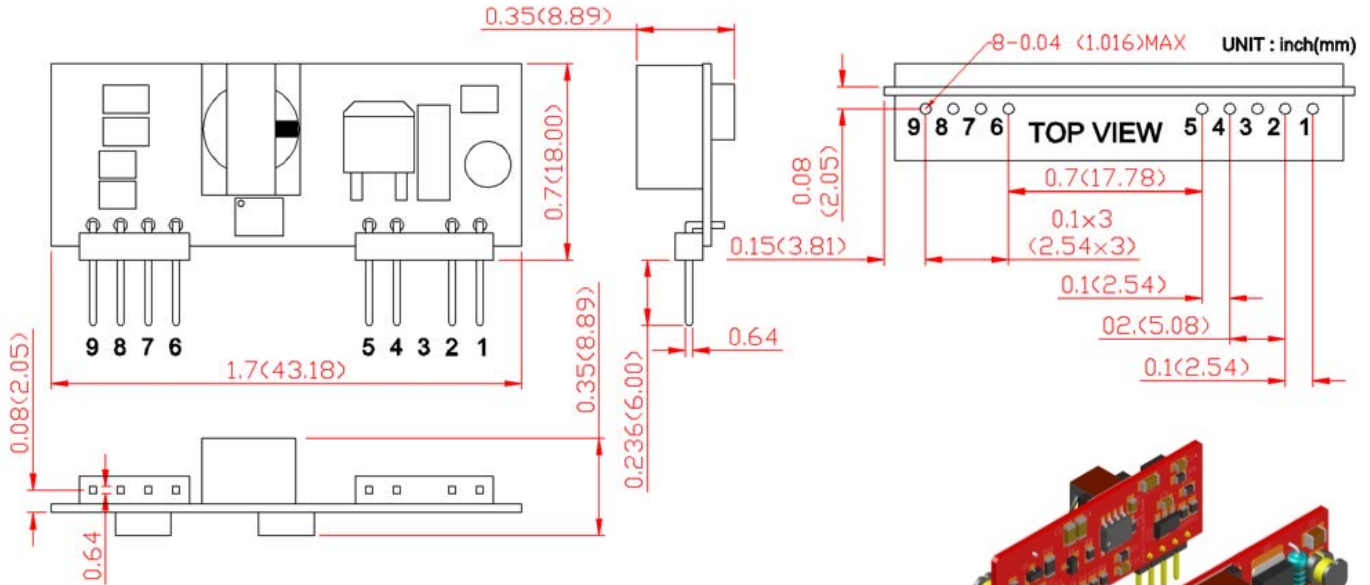
VS3								
OUTPUT				INPUT				
9	8	7	6	5	4	3	2	1
+Vo	x	x	-Vo	-Vin	-Vin	x	+Vin	+Vin

(43x18x T9mm)		VS3- Series 3W (Single Output) SPECIFICATION				
Model	Input Range	V-out	I-out	P-out	Efficiency	
VS3-5-033	4.6~7.2 VDC	3.3V	0.6A	2.0W	66%	
VS3-5-05	4.6~7.2 VDC	5V	0.4A	2.0W	66%	
VS3-5-12	4.6~7.2 VDC	12V	0.2A	2.4W	68%	
VS3-12-033	9~18 VDC	3.3V	0.7A	2.3W	73%	
VS3-12-05	9~18 VDC	5V	0.6A	3.0W	73%	
VS3-12-12	9~18 VDC	12V	0.25A	3.0W	75%	
VS3-24-033	18~36 VDC	3.3V	0.7A	2.3W	78%	
VS3-24-05	18~36 VDC	5V	0.6A	3.0W	78%	
VS3-24-12	18~36 VDC	12V	0.25A	3.0W	80%	

VD3 - Series 3W (DUAL OUTPUT) DC-DC CONVERTER / PCB on-board type

It is vertical type.
It is small and light.
It is convenient to install in the narrow space. (1.5W,3.0W)

버티컬 타입 입니다.
작고 가볍습니다.
좁은 공간에 장착하기에 편리 합니다. (1.5W,3.0W)



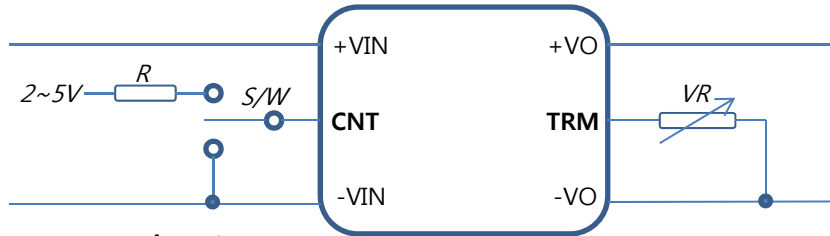
VD3
43x18xT9mm

VD3								
OUTPUT				INPUT				
9	8	7	6	5	4	3	2	1
+Vo	COM	COM	-Vo	-Vin	-Vin	x	+Vin	+Vin

(43x18x T9mm)		VD3- Series 3W (Dual Output) SPECIFICATION				
Model	Input Range	V-out	I-out	P-out	Efficiency	
VD3-5-0505	4.6~7.2 VDC	±5V	±0.20A	2.0W	67%	
VD3-5-1212	4.6~7.2 VDC	±12V	±0.08A	2.0W	67%	
VD3-5-1515	4.6~7.2 VDC	±15V	±0.07A	2.0W	67%	
VD3-12-0505	9~18 VDC	±5V	±0.30A	3.0W	75%	
VD3-12-1212	9~18 VDC	±12V	±0.12A	3.0W	75%	
VD3-12-1515	9~18 VDC	±15V	±0.10A	3.0W	75%	
VD3-24-0505	18~36 VDC	±5V	±0.30A	3.0W	77%	
VD3-24-1212	18~36 VDC	±12V	±0.12A	3.0W	77%	
VD3-24-1515	18~36 VDC	±15V	±0.10A	3.0W	77%	
VD3-48-0505	36~72 VDC	±5V	±0.30A	3.0W	78%	
VD3-48-1212	36~72 VDC	±12V	±0.12A	3.0W	78%	
VD3-48-1515	36~72 VDC	±15V	±0.10A	3.0W	78%	

DC-DC CONVERTER TECHNICAL NOTES

PIN FUNCTION			
1	INPUT	+VIN	+SIDE INPUT VOLTAGE
2		-VIN	-SIDE INPUT VOLTAGE
3		CNT	REMOTE ON/OFF CONTROL
4	OUTPUT	+VO	+SIDE OUTPUT VOLTAGE
5		COM	GROUND OF OUTPUT (ONLY FOR MULTIPLE OUTPUT)
6		-VO	-SIDE OUTPUT VOLTAGE
7		TRM	ADJUST OF OUTPUT (TRIM)
8		VS	REMOTE SENSING OF OUTPUT VOLTAGE
9		NC	NOT CONNECTOR



TRM (adjust output voltage)

The output voltage is adjustable by external resistor.

When the output voltage adjustment is not used. Open the TRM pin.

When the output voltage is set too high, the over voltage protection circuit comes into effect.

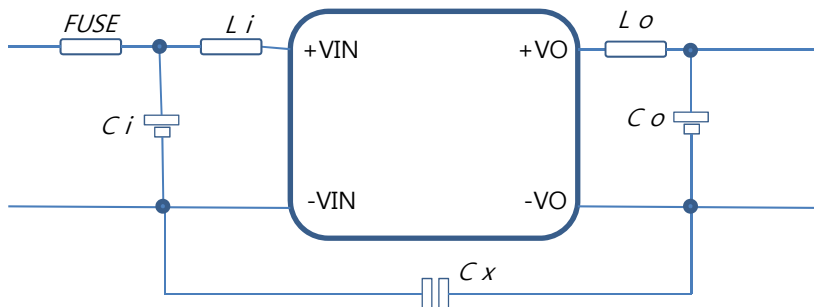
CNT (remote on/off control)			
NO	MODEL SERIES	CNT / PIN- FUNCTION	OPERATED CONDITION (제품 동작상태)
1	LS, LD, GMS, GMD	OPEN OR HIGH(+2~5V)	OFF
		SHORT OR LOW(0~0.6V)	ON
2	IS, ID	HIGH(+2~5V)	OFF
		OPEN OR LOW	ON

Wiring to external circuit

C_i , C_o : External capacitors are required at both input and output to reduce ripple.

C_X : ceramic capacitor is required to reduce common mode noise . Minimum 0.0022uF 1KV

L_i , L_o : inductance 2~5uH



VIN	Ci
12V	100uF 25V
24V	68uF 50V
48V	33uF 100V
72V	22uF 150V

VO	Co
5V	100uF 10V
15V	47uF 25V
24V	47uF 35V
48V	47uF 100V