

FEATURES:

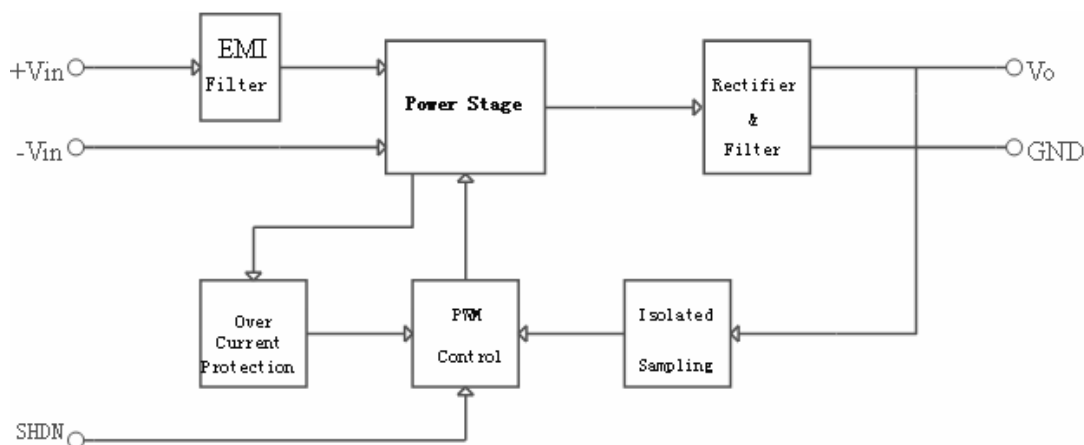
- High Reliability & Compact
- External Shut Down
- Output Over Current & Short Circuit Protection
- Input to Output Isolated
- Metal-Sealed, Suitable for PCB Mount



DESCRIPTION:

WKI28300S-10 & WKI28700NS-10 Series high voltage DC/DC converters are miniaturized, well regulated power supplies. The output voltages are 300V_{DC} and -700V_{DC} respectively. The input voltage ranges from 20V_{DC} to 29V_{DC} and the output power is 10W. The conductive interference is reduced with built-in input LC filters. Internal high capacitance ceramic capacitors in the output loop effectively suppress the output voltage ripple.

BLOCK DIAGRAM:



ABSOLUTE MAXIMUM RATINGS:

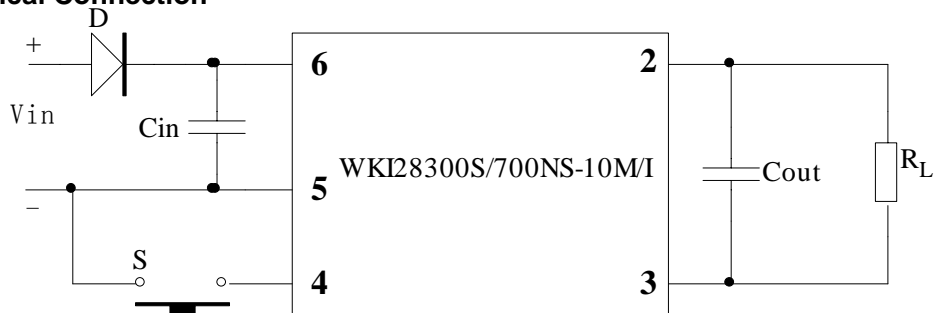
Input Voltage:	29V _{DC}
Operating Temperature(Ambient):	-35°C ~ +60°C (M/I)
Storage Temperature Range:	-40°C ~ +65°C (M/I)
Lead Soldering Temperature(10 s):	300°C

THE MAIN CHARACTERISTICS:

Input Characteristics							
	MIN	TYP	MAX	Units			
Input Voltage	20	28	29	V			
No Load Power Dissipation	-	-	3	W			
Efficiency (Full Load)	70	-	-	%			
Output Characteristics							
	WKI28300S-10			WKI28700NS-10			Units
	MIN	TYP	MAX	MIN	TYP	MAX	
Output Current	-	-	0.033	-	-	0.014	A
Output Voltage Accuracy	285	300	315	-725	700	-675	V
Load Regulation	-	0.5	1	-	0.5	1	%
Line Regulation	-	0.5	1	-	0.5	1	%
Ripple Voltage VRMS(20MHz) (Full Load)	-	-	250	-	-	1500	mVrms
Start-up Delay	-	25	-	-	25	-	ms
Shutdown Recovery Time	-	25	-	-	25	-	ms
Isolation Characteristics							
Isolation(Min)	WKI28300S-10			WKI28700NS-10			Units
Input to Output Capacitance	0.012			0.012			μ F
Insulation Resistance	≥ 300			≥ 300			M Ω
Insulation Voltage(Output-Case)	1600VDC,60s			2400VDC,60s			-

APPLICATION NOTE:

Typical Connection



Recommend that the diode's rated current be large than 3A, and it's rated reverse voltage large than 50V. Cin's capacitance should be large than 4.7 μ F, and it's rated voltage should be large than 50V. Refer to Ripple Voltage Suppress section for the selection of Cout.

External Shut Down (SHDN)

The SHDN pin is used to achieve the function of External Shut Down. When the pin is left unconnected, the converter will output the high voltage; When the pin is connected to Vin-(the ground of input), the high voltage output is turn off.

● **Over Current & Short Circuit Protection**

WKI28300S-10 &WKI28700NS-10 Series high voltage DC/DC converter has the function of Over Current & Short Circuit Protection. When the converter is under either condition, it will be automatically in the mode of Protection. When the condition is removed, the converter will be automatically restored. Long time over current or short circuit operation is prohibited.

● **Ripple Voltage Suppress**

When the output voltage ripple can't be satisfied in your applications, it can still be suppressed by adding capacitors between the output Vo+ and Vo- pins. Insure that the rated voltage of the capacitors is higher than the output voltage of the converters. And large capacitance can be accomplished with several capacitors in parallel.

● **Reverse Polarity Protection:**

Reverse Polarity Protection is easily achieved by placing a diode in series with the input to the converter. (See Typical Connection)

Environmental Screening:

M:				
Num	TEST ITEMS	METHODS	REQUEST	CONDITIONS
1	Stabilization Bake	MIL-STD-883	100%	+125°C 24h
2	ESS	----	100%	-40°C~+60°C 10 Cycles
3	Burn-in	----	100%	+60°C (Ambient, Full Load, 160h)
4	Hermeticity Testing	MIL-STD-883	100%	Fine Leak, Cond. A1
				Gross Leak, Cond. C1
5	Final Test	---	100%	-35°C, +25°C, +60°C
I:				
1	Burn-in	----	100%	+60°C (Ambient, Full Load, 96h)
2	Final Test	---	100%	-35°C, +25°C, +60°C

Environmental Qualification:

Num	TEST ITEMS	CONDITIONS
1	Shock	35g (Half-sine wave, Triaxial, Three times each axial, remain 11ms)
2	Depression(Altitude)	40 pa
3	Low Temperature Storage	-40°C, 48h
4	High Temperature Storage	+65°C, 48h
5	Humidity steady	95%~98%, 96h

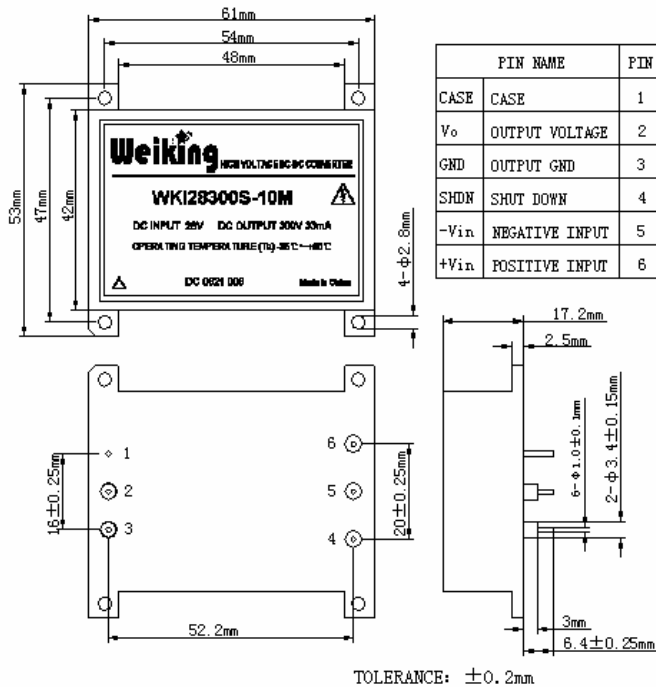
MECHANICAL SPECIFICATIONS:

Size(L×W×D): 61×42×17.2mm

Material: Cold Rolled Steel

Weight: ≤150g

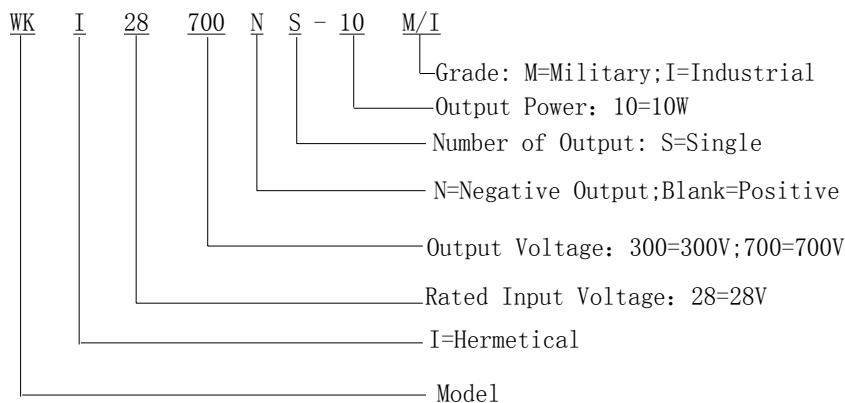
DIMENSIONS:



Notes:

1. Connect pins correctly in operation. Δ indicates pin1.
2. Secure the power module to the board with fasteners at the flanges before weld the pins to the board.
3. Mount the bottom of power module to the heat sink tightly. If necessary, thermal washers and shockproof gaskets could be employed.
4. Don't bend or twist the pins, or the glass bead would be cracked and the module would be loss of hermeticity consequently.

ORDERING INFORMATION:



MARK SPECIFICATION:

Serials Number: 1001001, which indicates this product has been manufactured in the 1th week of 2010, and the sequence number is 001.