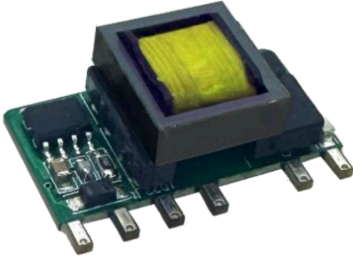


ACS03W-xxV



FEATURES

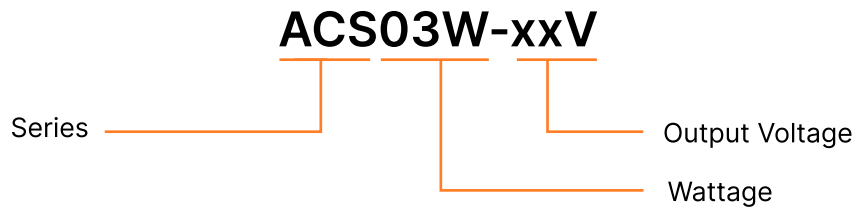
- Wide input range (85-305VAC, 100-430VDC)
- Size 26.5*13.5*11.5mm
- No-load power consumption $\leq 0.05W$
- Protection type: over load/over voltage
- Operating temperature range -40°C to +85°C
- 3000V isolation voltage
- 100% high temperature aging and testing
- 3 years warranty



APPLICATIONS

- Industrial Control • LED • Lamp Control • Power
- Security • Comnicate • Smart Home • Medical Treatment

MODEL NUMBERING



SELECTION GUIDE

Product Model	Input Voltage	Rated Power (W)	Output Voltage (V)	Output Current (A)	Ripple & Noise (mVp-p)	Efficiency (%)
ACS03W-03V	85-305VAC 100-430VDC	3	3.3	0.6	100	72
ACS03W-05V		3	5	0.6	100	72
ACS03W-09V		3	9	0.33	100	78
ACS03W-12V		3	12	0.25	100	78
ACS03W-15V		3	15	0.2	100	78
ACS03W-24V		3	24	0.125	100	78

OUTPUT CHARACTERISTICS

Parameter	Units
Voltage Tolerance	±5.0%
Line Regulation	±1.5%
Load Regulation	±3.0%
Setup, Rise Time (Typ.)	1000ms, 80ms/230VAC at full load
Hold Up Time (Typ.)	50ms/230VAC at full load

INPUT CHARACTERISTICS

Parameter	Units
Voltage Range	85-305VAC 100-430VDC
Nominal Voltage	47-63Hz
Current (Typ.)	0.12A/115VAC 0.07A/230VAC
Inrush Current (Typ.)	Cold boot 40A/230VAC
Leakage Current (Typ.)	<1mA/230VAC/50Hz

PROTECTION

Parameter	Units					
Over Load	≥110% load, self-recovery after troubleshooting					
Over Voltage	Output off, normal operation can be resumed after power supply restart					
	Voltage	3.3/5VDC	9VDC	12VDC	15VDC	24VDC
	Range	≤7.5V	≤12V	≤16V	≤20V	≤30V

ENVIRONMENT

Parameter	Units
Working TEMP.	-40°C to +85°C (Refer to "Derating curve")
Working Humidity	85%RH max
Storage TEMP. Humidity	-40°C to +85°C, 10-95% RH
TEMP. Coefficient	0.03%/ (0-50°C)
Vibration	10-500Hz, 2G, 10min./1cycle, 60min.each along X, Y, Z axes

SAFETY & EMC

Parameter	Units
Safety Standards	EN62368, IEC62368
Isolation Voltage	I/P-O/P: 3000VAC
Isolation Resistance	I/P-O/P: >100M Ohms/500VDC 25°C 70% RH
EMC Emission & Immunity	EN55011, EN55032 (CISPR32) CLASS B (Refer to "Typical Application")
ESD	IEC/EN 61000-4-2 level 4 Contact ±8kV/Air ±15kV (Refer to "Typical Application")
RF	IEC/EN 61000-4-3 level 4 (Refer to "Typical Application")
EFT	IEC/EN 61000-4-4 level 4 4kV (Refer to "Typical Application")
Surge	IEC/EN 61000-4-5 level 4 2kV (Refer to "Typical Application")
Harmonic Current	EN61000-3-2 (Refer to "Typical Application")

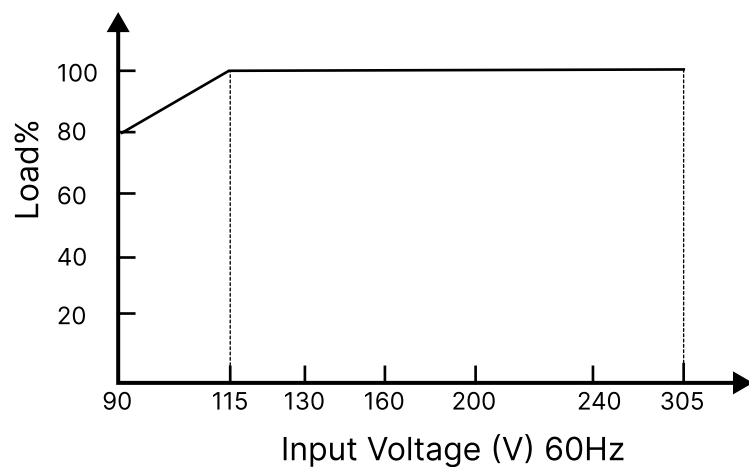
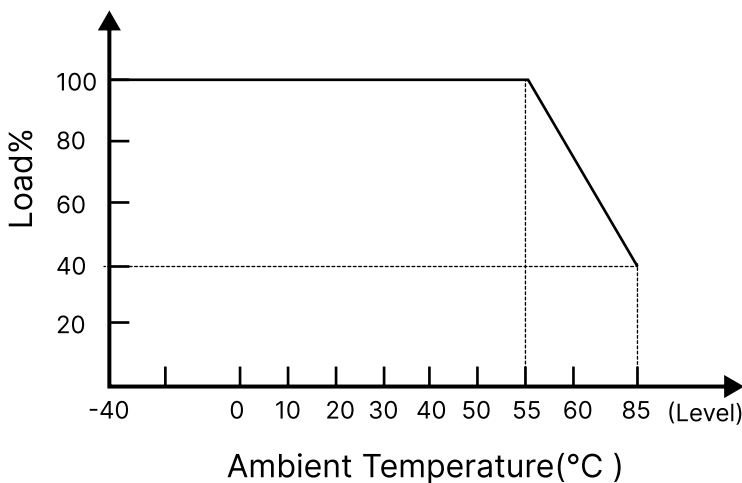
DIMENSION, WEIGHT & PACKING

Parameter	Units
MTBF	300K hrs min. MIL-HDBK-217F (25°C)
Dimension	26.5*13.5*11.5mm (L*W*H)
Weight	8g
Carton Size	360*300*250mm

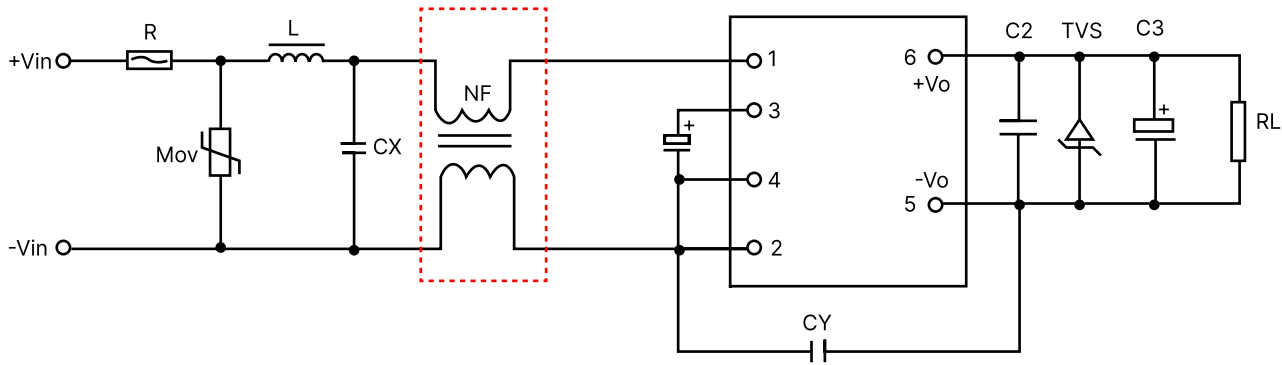
NOTE

1. All parameters not specially mentioned, are measured when TA=25°C, humidity<75%, input nominal voltage and output rated load.
2. Measurement method of ripple & noise: Parallel line test method shall be adopted. Meanwhile, 0.1uF high-frequency ceramic capacitor and one 47uF electrolytic capacitor shall be connected in parallel at the terminal for measurement under 20Mhz bandwidth and connected according to "typical application". Element parameters shall be the same as those measured in the table.
3. This series of over voltage protection protects the subsequent circuit in case of module abnormality through the peripheral TVS tube.
4. This model is of PCB only type. To meet the safety requirements, a safe distance of at least 6.4mm shall be maintained between the primary and secondary peripheral components of the module.
6. In order to improve the conversion efficiency of light load, when the module load is less than 30% of the rated load, the module may have weak audio noise, but it will not affect the performance and reliability of the product.
7. The module shall be fixed with glue after assembly.

PRODUCT CHARACTERISTIC CURVE



TYPICAL APPLICATION



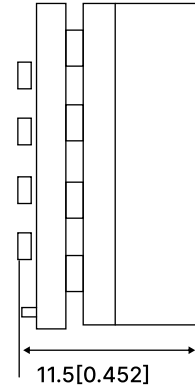
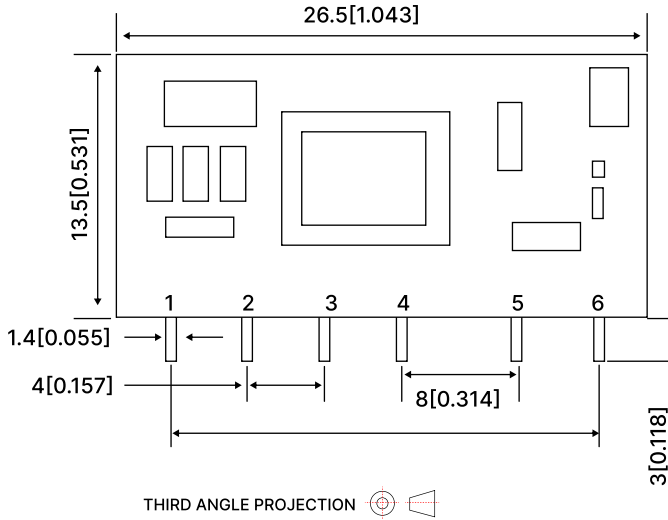
NOTE

1. If the product works under the minimum required load, it cannot guarantee that the performance of the product complies with all the performance indicators in this manual;
2. The maximum capacitive load is tested under the input voltage range and full load condition;
3. Unless otherwise stated, all indexes in this manual are measured at $T_a=25^{\circ}\text{C}$, humidity $<75\%RH$, nominal input voltage and rated output load;
4. All index testing methods in this manual are based on the enterprise standards of the company;
5. Our company can provide product customization, specific needs can directly contact our technical staff;
6. RHENXV reserves the right to make changes to the product at any time without notice.

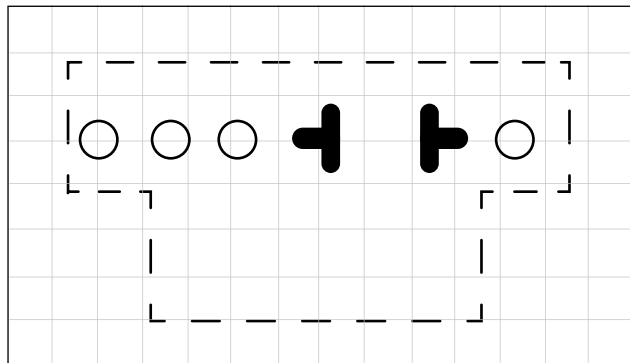
LIST OF COMPONENTS

Product Model	R	MOV	L	C1	C2	CX	CY	C3	TVS
ACS03W-03V	10 Ω /1W	10D561K	1mH	10 μ F/ 450V	104K/50V	104K/275 VAC	1nF/400 VAC	1000uF/16V	P6KE7.5A
ACS03W-05V								1000uF/16V	P6KE7.5A
ACS03W-09V								470uF/16V	P6KE12A
ACS03W-12V								470uF/16V	P6KE16A
ACS03W-15V								470uF/25V	P6KE20A
ACS03W-24V								220uF/35V	P6KE30A

DIMENSIONS AND INSTALLATION



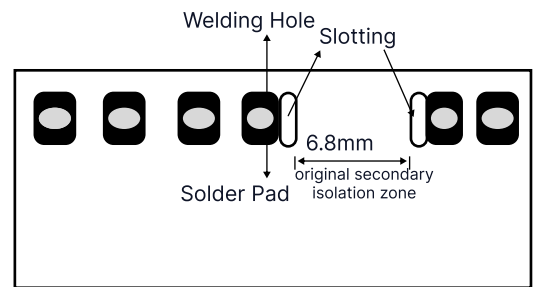
Pin	Function
1	AC(L)
2	AC(N)
3	+V(CAP)
4	-V(CAP)
5	-Vo
6	+Vo



Note: Grid Spacing 2.54 * 2.54mm

NOTE: Unit size: mm[inch] Unmarked tolerances: ±0.5mm

**ACS03W-12V Series
Recommended Solder Pads**



NOTE

1. If the product works under the minimum required load, it cannot guarantee that the performance of the product complies with all the performance indicators in this manual;
2. The maximum capacitive load is tested under the input voltage range and full load condition;
3. Unless otherwise stated, all indexes in this manual are measured at Ta=25°C, humidity <75%RH, nominal input voltage and rated output load;
4. All index testing methods in this manual are based on the enterprise standards of the company;
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