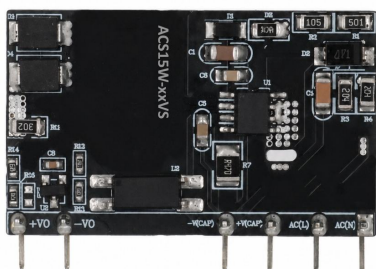


ACS15W-xxVS Series



FEATURES

- Input voltage range: 85~305VAC (100~430VDC)
- Working temperature range : -40°C ~ +85°C
- Overall Dimensions : 40.77× 24.64 × 13.16mm
- EMC and safety specifications meet relevant standards such as IEC/EN61000-4, CISPR32/EN55032, EN62368/IEC62368, etc
- Low ripple and noise
- Low power consumption, green environmental protection, no-load loss<50mW
- High efficiency, high power density
- Output short circuit, overvoltage and overload protection
- Isolation voltage up to 3000VAC
- Safety level Class B

MODEL NUMBERING

ACS15W-xxVS

Series Name Rated Wattage Output Voltage

SELECTION GUIDE

Product Model	Output Voltage (Vdc)	Output Current (mA)	Output Power (W)	Efficiency (230VAC, %/Typ.)	Max.Capacitive Load(μF)
ACS15W-05VS	5	3000	15	79	15000
ACS15W-12VS	12	1250	15	85	4000
ACS15W-15VS	15	1000	15	86	2000
ACS15W-24VS	24	625	15	87	1000

INPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage Range	AC Input	85	--	305	VAC
	DC Input	100	--	430	VDC
Input voltage frequency	AC Input	47	--	63	Hz
Input Current	115VAC	--	0.26	--	A
	230VAC	--	0.12	--	A
Impulse current	115VAC	--	40	--	A
	230VAC	--	50	--	A
Leakage Current	230VAC/60Hz	0.75mA RMS Max			
External fuse	fusible resistor : 3.3Ω/1W				

Remarks: This product does not support hot plug

OUTPUT CHARACTERISTICS

Parameter	Conditions	Min.	Typ.	Max.	Units
Output voltage accuracy	10% -100% load	--	±2	±3	%
Linear regulation rate	Rated load	--	±2	--	%
Load regulation rate	10% to 100% load	--	±1	±2	%
Minimum load		0	--	--	%
Standby power	At room temperature, 230VAC input	--	0.1	0.25	W
Ripple & Noise	20MHz bandwidth (peak to peak)	--	--	150	mVp-p
Start Rise Time	115VAC	--	50	--	ms
	230VAC	--	15	--	ms
Overvoltage protection	5V	≤9V	--	--	V
	12V	≤16V	--	--	V
	15V	≤20V	--	--	V
	24V	≤30V	--	--	V
Short circuit protection	Hiccup type, capable of long-term short circuit and self recovery				
Overcurrent protection	110% -220% Io, Self recovering				
Over Temperature Protection	Hiccup mode, self recovery				

Note: The testing method for ripple and noise is parallel line testing, and a 100uF electrolytic capacitor and a 0.1uF ceramic capacitor need to be connected in parallel at the output end

GENERAL CHARACTERISTICS

Parameter	Conditions		Min.	Typ.	Max.	Units
Isolation voltage	Input-Output,	Test time 1 minute, Leakage current less than 5mA	3600	--	--	VAC
			5000	--	--	VDC
Insulation resistance	Input-Output,	Environmental temperature: 25 ± 5 °C, Relative humidity: less than 95% RH, uncondensed, Test voltage: 500VDC.	50	--	--	MΩ
Working temperature			-40	--	+85	°C
Storage temperature			-40	--	+105	°C
Working humidity			20	--	85	%RH
Storage humidity			--	--	95	%RH
Switching frequency			--	65	--	KHz
Output power derating	Operating temperature derating	-40°C to -25°C	4	65	--	%/°C
		+55°C to +70°C	3.34	--	--	%/°C
	Operating temperature derating	85VAC-100VAC	1.67	--	--	%/VAC
		277VAC-305VAC	0.72	--	--	%/VAC
Standard for Safety	Altitude derating	2000m-5000m				
Mean Time Between Failures 【MTBF】	165Khrsmin. MIL-HDBK-217F (25°C		165	--	--	kHours
Safety standards	Compliant with GB4943.1, BS EN/EN62368-1, EN60335-1, EN61558-1, IEC62368-1, EN62477-1; Security Class I.					

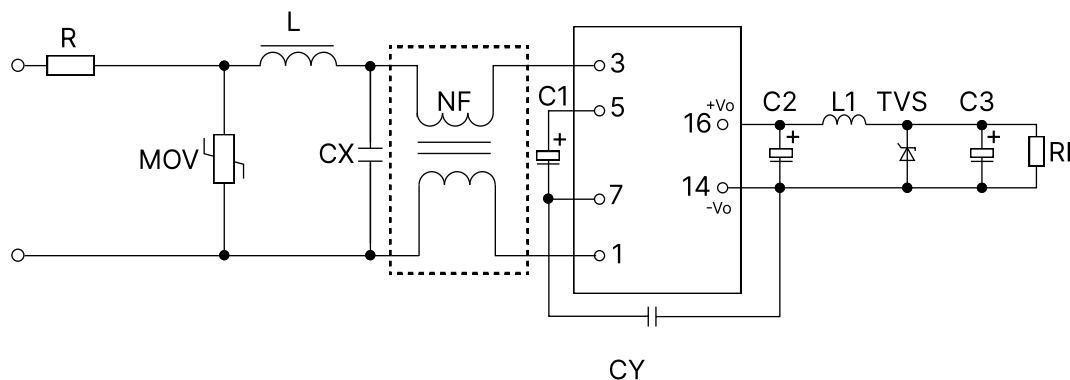
PHYSICAL CHARACTERISTICS

Parameter	Contents
Housing material	None (bare board)
Overall dimensions	40.77 × 24.64 × 13.16 mm (L*W*H)
Weight	12g (Typ.)
Cooling mode	Natural air cooling

SAFETY & EMC

Parameter	Category	Content		
EMI	Conductive disturbance	CISPR32 EN55032	150kHz—30MHz, CLASS A	
		CISPR32 EN55032	150kHz—30MHz, CLASS B	
	Radiation disturbance	CISPR32 EN55032	30MHz—1GHz, CLASS A	
		CISPR32 EN55032	30MHz—1GHz, CLASS B*	
EMS	Electrostatic discharge	IEC/EN61000-4-2	Contact $\pm 6\text{KV}$ /Air $\pm 8\text{KV}$	Perf. Criteria A
	Radiated immunity	IEC/EN61000-4-3	80MHz – 1GHz 10V/m	Perf. Criteria A
	EFT	IEC/EN61000-4-4	$\pm 4\text{KV}$, (5 or 100)kHz	Perf. Criteria A
	Surge immunity	EC/EN61000-4-5	line to line $\pm 2\text{KV}$	Perf. Criteria A
	Conducted disturbance immunity	IEC/EN61000-4-6	0.15MHz-80MHz 10Vr.m.s	Perf. Criteria A
	Voltage dip	IEC/EN61000-4-11	0%, 70%	Perf. Criteria A
	Voltage Interruption	IEC/EN61000-4-11	0% of 230Vac, 0Vac, 5000ms	Perf. Criteria B

TYPICAL APPLICATION CIRCUIT

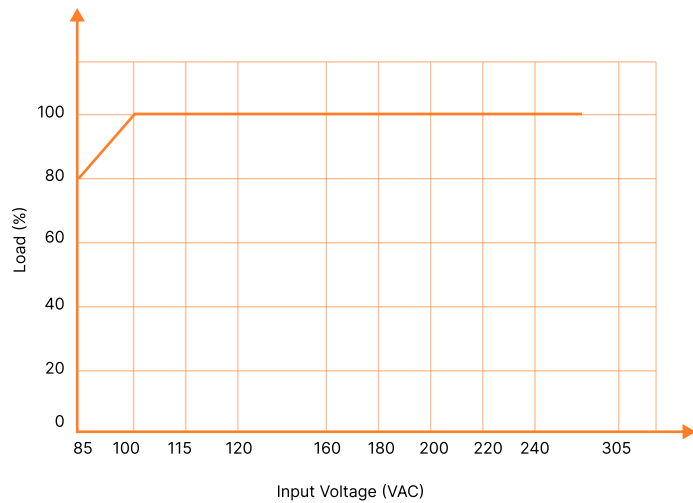
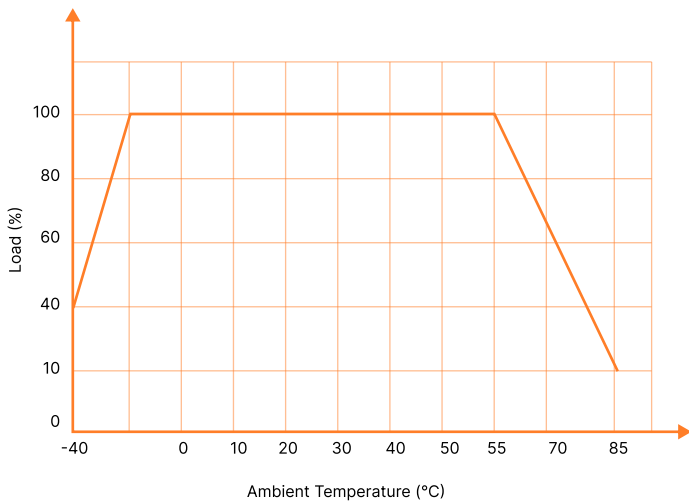


Product Model	R	MOV	L	C1	NF	CX	CY	L1	C3	TVS
ACS15W-05VS	3.3Ω/1W	10D561K	1mH	22μF/450V	30mH	104K/ 275V	2.2nF/ 400V	2.2uH/ 3A	100~ 680uF	P6KE7.5A
ACS15W-12VS										P6KE16A
ACS15W-15VS										P6KE20A
ACS15W-24VS										P6KE30A

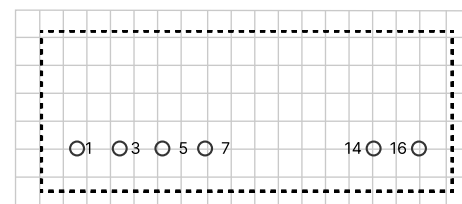
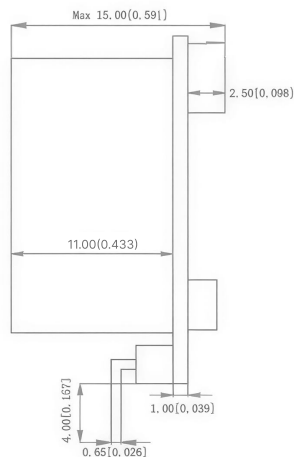
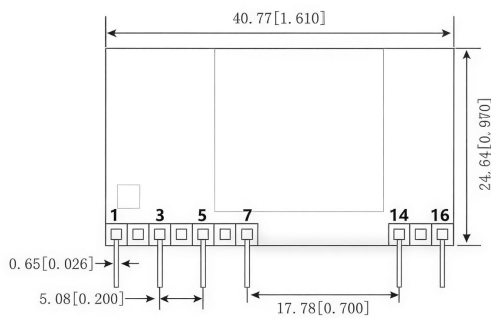
Note:

- C2 is an electrolytic capacitor used to filter out high-frequency noise. C3 is an electrolytic capacitor with high frequency and low resistance characteristics. TVS tube protects the rear circuit when the module experiences abnormal overvoltage. It is recommended to use
- The common mode inductor NF within the dashed box needs to be added when meeting higher EMC requirements, but it is not necessary in general scenarios

PRODUCT CHARACTERISTIC CURVE



OVERALL DIMENSIONS AND PIN FUNCTIONS



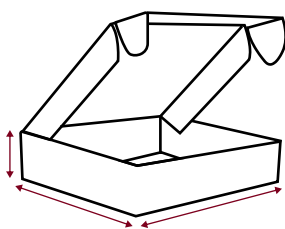
PCB(Layout)

2.54*2.54

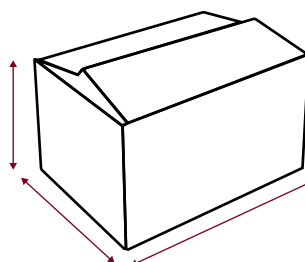
Note:
 Dimensions in mm
 Terminal diameter tolerance: ± 0.10 [± 0.004]
 Undeclared tolerance: ± 0.50 [± 0.020]

Pin	Function
1	AC(N)
3	AC(L)
5	+V(cap)
7	-V(cap)
14	-Vo
16	+Vo

PACKAGING METHOD



150 Pieces/Inner box



750 Pieces/Outer box

NOTES & INSTRUCTIONS

1. The input voltage shall not exceed the specified range value, otherwise permanent and unrecoverable damage may be caused;
2. Unless otherwise specified, the parameters in this manual are measured at 25°C, 40%~75% humidity, input nominal voltage and output pure resistance mode under full load
3. All index test methods are based on the company's enterprise standards.
4. The copyright and the final interpretation right of the product belong to RHENXV.