

ACAH Series

- Feature: Low ESR, Surface mounting, Reduced height, Wide temperature
- Suitable for DC-DC converters, voltage regulators and decoupling applications
- Rate voltage: 2~35Vdc.
- Endurance: Endurance 2000hrs at 105°C
- RoHS Compliant



Specifications			
Item	Conditions	Characteristics	
Category Temperature Range		-55 to +105 °C	
Rated Voltage Range		2 to 35 Vdc	
Capacitance Tolerance	at 20°C, 120Hz	±20 % (M) ; Y : +10 ~ -35%	
Leakage Current	at 20°C after 2 minutes	$I \leq 0.1CV$ (2 V.DC to 6.3 V.DC) $I \leq 0.3CV$ (10 V.DC to 25 V.DC) I : Leakage Current(μA), C : Rated Capacitance(μF), V : Rated Voltage(V)	
Surge Voltage	15 to +35°C	Rated voltage × 1.25 (2 V.DC to 16 V.DC) Rated voltage × 1.15 (20 V.DC to 25 V.DC)	
Dissipation Factor (tanδ)	at 20°C , 120Hz	0.06 max.	
Endurance	105°C, rated voltage applied, 2000 hrs.	Appearance	No significant damage
		Capacitance Change	±20% of the initial value
		Dissipation Factor	≤ 200% of the initial specified value
		Leakage Current	2 V.DC to 6.3 V.DC ≤ 300% of the initial specified value 10 V.DC to 25 V.DC ≤ within the initial limit
Damp Heat, Steady State	60°C, 90 to 95%RH, 500 hrs.	Appearance	No significant damage
		Capacitance Change	(2 V.DC to 2.5 V.DC) +70%, -20% of the initial value (10 V.DC to 25 V.DC) +60%, -20% of the initial value
		Dissipation Factor	≤ 200% of the initial specified value
		Leakage Current	2 V.DC to 6.3 V.DC within the initial specified value 10 V.DC to 35 V.DC ≤ 300% of the initial specified value
Surge Voltage	The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages, at 15°C to 35°C for 30 seconds through a protective resistor(R=1KΩ) and discharge for 5min 30 seconds.	Appearance	No significant damage
		Capacitance Change	±10% of the initial value
		Dissipation Factor	within the initial specified value
		Leakage Current	within the initial specified value

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Standard Ratings

WV(VDC)	Cap (μF)@120Hz	tanδ Max. @120Hz	Leakage Current Max. (μA)	ESR Max. (mΩ) @100kHz	Ripple Current (mArms) @100kHz	Part No.
2	470	0.06	94	9.0	6,300	ACAH2R0S471E09
	470	0.06	94	9.0	6,300	ACAH2R0S471E09Y
	470	0.06	94	6.0	7,500	ACAH2R0S471E06
	470	0.06	94	4.5	8,500	ACAH2R0S471E04
2.5	470	0.06	117.5	9.0	6,300	ACAH2R5S471E09
	470	0.06	117.5	9.0	6,300	ACAH2R5S471E09Y
	470	0.06	117.5	6.0	7,500	ACAH2R5S471E06
	470	0.06	117.5	4.5	8,500	ACAH2R5S471E04
10	100	0.06	300	40	3,200	ACAH100S101E40
	100	0.06	300	40	3,200	ACAH100S101E40Y
16	47	0.06	225.6	40	3,200	ACAH160S470E40
	56	0.06	268.8	40	3,200	ACAH160S560E40
	68	0.06	326.4	40	3,200	ACAH160S680E40
20	33	0.06	198.0	40	3,200	ACAH200S330E40
25	33	0.06	247.5	40	3,200	ACAH250S330E40
35	22	0.06	231	40	3200	ACAH350S220E40

Temperature Compensation Multipliers for Ripple Current

	≤ 45°C	45°C < T ≤ 85°C	85°C < T ≤ 105°C
2 V.DC to 6.3 V.DC	1.0	0.7	0.25
10 V.DC to 35 V.DC	1.0	0.8	0.5

PRODUCT IDENTIFICATION

<u>ACAH</u>	<u>2R5</u>	<u>S</u>	<u>471</u>	<u>E04</u>	<input type="checkbox"/>
Product	Rated Voltage	Case Height	Capacitance	ESR	Suffix for special code
	2R5: 2.5V	S:1.9mm	471=470μF	E04: 4.5mΩ	Y=+10~-35%

DIMENSIONS AND MARKING

Case size	L	WA	WB	H	P
S	7.3±0.3	4.3±0.3	2.4±0.2	1.9±0.3	1.3±0.2

