ACAL Series



- Feature: Surface mounting, Reduced height, Wide temperature range
- Suitable for DC-DC converters, voltage regulators and decoupling applications
- Rate voltage: 2~2.5Vdc.
- Endurance: 2000hrs at 105℃
- RoHS Compliant

Specifications

Item	Conditions	Characteristics	
Category Temperature Range		-55 to +105 ℃	
Rated Voltage Range		2 to 2.5 Vdc	
Capacitance Tolerance	at 20℃, 120Hz	±20 % (M)；Y：+10 ~ -35%	
Leakage Current	at 20℃ after 2 minutes	I ≦ 0.1CV (2 V.DC to 2.5 V.DC) I：Leakage Current(μA), C：Rated Capacitance(μF), V：Rated Voltage(V)	
Surge Voltage	15℃ to 35℃	Rated voltage × 1.25 (2 V.DC to 2.5 V.DC)	
Dissipation Factor (tanδ)	at 20℃，120Hz	Case Height : S Type, 0.06 max.	
Endurance	105℃, 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 2.5 V.DC ≤ 300% of the initial specified value
Damp Heat, Steady State	60℃, 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
		Dissipation Factor	≤ 200% of the initial specified value
		Leakage Current	2 V.DC to 2.5 V.DC within the initial specified value
Surge Voltage	The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages, at 15℃ to 35℃ 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

ACAL Series

Standard Ratings

WV(VDC)	Cap (μF)@120Hz	tanδ Max. @120Hz	Leakage Current Max. (μA)	ESR Max. (mΩ) @100kHz	Ripple Current (A r.m.s) @100kHz	Part No.
2	220	0.06	44	9	6.3	ACAL2R0S221E09
	220	0.06	44	9	6.3	ACAL2R0S221E09Y
	330	0.06	66	6	7.5	ACAL2R0S331E06
	330	0.06	66	9	6.3	ACAL2R0S331E09
	330	0.06	66	9	6.3	ACAL2R0S331E09Y
	470	0.06	94	3	10.2	ACAL2R0S471E03
	470	0.06	94	4.5	8.5	ACAL2R0S471E04
	470	0.06	94	6	7.5	ACAL2R0S471E06
	470	0.06	94	9	6.3	ACAL2R0S471E09
	470	0.06	94	9	6.3	ACAL2R0S471E09Y
2.5	220	0.06	55	9	6.3	ACAL2R5S221E09
	220	0.06	55	9	6.3	ACAL2R5S221E09Y
	330	0.06	82.5	6	7.5	ACAL2R5S331E06
	330	0.06	82.5	9	6.3	ACAL2R5S331E09
	330	0.06	82.5	9	6.3	ACAL2R5S331E09Y
	470	0.06	117.5	3	10.2	ACAL2R5S471E03
	470	0.06	117.5	4.5	8.5	ACAL2R5S471E04
	470	0.06	117.5	6	7.5	ACAL2R5S471E06
	470	0.06	117.5	9	6.3	ACAL2R5S471E09

Temperature Compensation Multipliers for Ripple Current			
	≦ 45˚C	45˚C ＜ T ≦ 85˚C	85˚C ＜ T ≦ 105˚C
2 V.DC to 2.5 V.DC	1.0	0.7	0.25

PRODUCT IDENTIFICATION

ACAL	2R5	S	331	E06	□
Product	Rated Voltage 2R5: 2.5V	Case Height S:1.9mm	Capacitance 331=330μF	ESR E06：6mΩ	Suffix for special code 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±0.1	1.3±0.2



