



ACKL Series

- Feature: Surface mounting, Reduced height, Wide temperature range
- Suitable for DC-DC converters, voltage regulators and decoupling applications
- Rate voltage: 2Vdc.
- Endurance: 5500hrs at 125°C
- RoHS Compliant



Specifications			
Item	Conditions	Characteristics	
Category Temperature Range		-55 to +125 °C	
Rated Voltage Range		2 Vdc	
Capacitance Tolerance	at 20°C, 120Hz	±20 % (M) ; Y : +10 ~ -35%	
Leakage Current	at 20°C after 2 minutes	Shall not exceed values shown in standard ratings. (at 20°C after 2 mins.)	
Surge Voltage	15°C to 35°C	Rated voltage × 1.25 (at 15 to 35°C)	
Dissipation Factor (tanδ)	at 20°C , 120Hz	≤ 0.1	
Endurance	125°C , rated voltage applied, 5500 hrs	Appearance	No significant damage
		Capacitance Change	≤±20% of the initial value
		Dissipation Factor	≤ 200% of the initial specified value
		ESR(mΩ)	≤ 200% of the initial specified value
		Leakage Current	≤ 300% of the initial specified value
Damp Heat, Steady State	85°C, 85%RH,no-applied voltage,1000 hrs	Appearance	No significant damage
		Capacitance Change	(2 V.DC) +70%, -20% of the initial value
		Dissipation Factor	≤ 200% of the initial specified value
		ESR(mΩ)	≤ 200% of the initial specified value
		Leakage Current	≤ 500% of the initial specified value
Surge Voltage	The capacitors shall be subjected to 1000 cycles each consisting of charge with the surge voltages,125% rated voltage, at 15-35°C for 30 seconds through a protective resistor(R=1KQ)and discharge for5min 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 (A r.m.s) @100kHz	Part No.
105°C	125°C						
2	1.6	470	0.1	94	6	7.5	*ACKL2R0S471E06
		470	0.1	94	9	6.3	*ACKL2R0S471E09
2.5	2	330	0.1	82.5	9	6.3	*ACKL2R5S331E09

*2025 Q4 engineering

Temperature Compensation Multipliers for Ripple Current				
Temperature	≤ 45°C	45°C < T ≤ 85°C	85°C < T ≤ 105°C	105°C < T ≤ 125°C
2 V.DC	1.0	0.7	0.25	0.25

PRODUCT IDENTIFICATION

<u>ACKL</u>	<u>2R0</u>	<u>S</u>	<u>331</u>	<u>E09</u>
Product	Rated Voltage	Case Height	Capacitance	ESR
	2R0: 2.0V	S:1.9mm	331=330μF	E09: 9mΩ

DIMENSIONS AND MARKING

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

