

ACTL Series

- Feature: Surface mounting, Reduced height, Wide temperature range
- Suitable for DC-DC converters, voltage regulators and decoupling applications
- Rate voltage: 2-25Vdc.
- Endurance: 1000hrs at 125°C
- RoHS Compliant



Specifications			
Item	Conditions	Characteristics	
Category Temperature Range		-55 to +125°C	
Rated Voltage Range		2-25 Vdc	
Capacitance Tolerance	at 20°C, 120Hz	±20 % (M) ; Y : +10 ~ -35% ; K : ±10 %	
Leakage Current	at 20°C after 2 minutes	$I \leq 0.1CV$ (2 V.DC to 2.5 V.DC) $I \leq 0.3CV$ (16 V.DC to 25 V.DC) I : Leakage Current(μA), C : Rated Capacitance(μF), V : Rated Voltage(V)	
Surge Voltage	15°C to 35°C	Rated voltage × 1.25 (2 V.DC to 2.5 V.DC) Rated voltage × 1.15 (16 V.DC to 25 V.DC)	
Dissipation Factor (tanδ)	at 20°C , 120Hz	≤ 0.1	
Endurance	125°C, rated voltage applied, 1000 hrs	Appearance	No significant damage
		Capacitance Change	≤±20% of the initial value
		Dissipation Factor	≤ 200% of the initial specified value
		Leakage Current	within the initial specified value
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 (16 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 2.5 V.DC within the initial specified value 10 V.DC to 25 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, 125% rated voltage, at 15~35°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 (A r.m.s) @100kHz	Part No.
105°C	125°C						
2	1.6	330	0.1	66	6	7.5	ACTL2R0S331E06
		330	0.1	66	9	6.3	ACTL2R0S331E09
		470	0.1	94	4.5	8.5	ACTL2R0S471E04
		470	0.1	94	6	7.5	ACTL2R0S471E06
		470	0.1	94	9	6.3	ACTL2R0S471E09
		470	0.1	94	9	6.3	ACTL2R0S471E09Y
2.5	2	330	0.1	82.5	4.5	8.5	ACTL2R5S331E04
		330	0.1	82.5	6	7.5	ACTL2R5S331E06
		330	0.1	82.5	9	6.3	ACTL2R5S331E09
		330	0.1	82.5	9	6.3	ACTL2R5S331E09Y
16	16	47	0.1	225.6	40	3.2	ACTL160S470E40
		56	0.1	268.8	40	3.2	ACTL160S560E40
25	25	15	0.1	112.5	40	3.2	ACTL250S150E40
		22	0.1	165	40	3.2	ACTL250S220E40
		33	0.1	247.5	40	3.2	ACTL250S330E40

Temperature Compensation Multipliers for Ripple Current

Temperature	T ≤ 45°C	45°C < T ≤ 85°C	85°C < T ≤ 105°C	125°C < T
2 V.DC to 2.5 V.DC	1.0	0.7	0.25	0.25
16 V.DC to 25 V.DC	1.0	0.8	0.5	0.25

PRODUCT IDENTIFICATION

<u>ACTL</u>	<u>2R0</u>	<u>S</u>	<u>331</u>	<u>E06</u>
Product	Rated Voltage	Case Height	Capacitance	ESR
	2R0: 2.0V	S:1.9mm	331=330μF	E06: 6mΩ

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

