



ACTS Series

- Feature: Low ESR, Surface mounting, Reduced height, Wide temperature range
- Suitable for DC-DC converters, voltage regulators and decoupling applications
- Rate voltage: 16Vdc.
- Endurance: 1000hrs at 125°C
- RoHS Compliant



Specifications

Item	Conditions	Characteristics	
Category Temperature Range		-55 to +125 °C	
Rated Voltage Range		16 Vdc	
Capacitance Tolerance	at 20°C, 120Hz	±20 % (M) ; Y : +10 ~ -35% ; K : ±10 %	
Leakage Current	at 20°C after 2 minutes	$I \leq 0.3CV$ (16V.DC to 25V.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	≤ 0.1	
Endurance	125°C, rated voltage applied, 1000 hrs.	Appearance	No significant damage
		Capacitance Change	±20% of the initial value
		ESR	≤ 125% of the initial specified value
		Dissipation Factor	≤ 125% 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	(16V.DC) +60%, -20% of the initial value
		ESR	≤ 125% of the initial specified value
		Dissipation Factor	≤ 125% of the initial specified value
		Leakage Current	within 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	±20% of the initial value
		ESR	within the initial specified value
		Dissipation Factor	within the initial specified value
		Leakage Current	within the initial specified value
Solderability	Pb-free solder Around 25% rosin melted ethanol or isopropylalcohol Temperature : 245 ± 5 °C Immersing time : 2 ± 0.5 s	More than 95% of outer terminal surface to be covered	
Resistance to Solvents	Solvent : isopropylalcohol Immersing time : 30 ± 5 s Room temperature	No significant damage and marking readable	

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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℃	125℃						
2	1.6	560	0.1	112	4.5	8.5	ACTS2R0S561E04
		560	0.1	112	6	7.5	ACTS2R0S561E06
16	16	68	0.1	326.4	40	3.2	ACTS160S680E40
		100	0.1	326.4	40	3.2	ACTS160S101E40

Temperature Compensation Multipliers for Ripple Current				
Temperature	≤ 45°C	45°C < T ≤ 85°C	85°C < T ≤ 105°C	105°C < T ≤ 125°C
16 V.DC	1.0	0.8	0.7	0.25

PRODUCT IDENTIFICATION

<u>ACTS</u>	<u>160</u>	<u>S</u>	<u>680</u>	<u>E40</u>	☐
Product	Rated Voltage	Case Height	Capacitance	ESR	Suffix for special code
	160: 16V	S:1.9mm	680=68μF	E40: 40mΩ	Y: Capacitance +10 ~ -35%
					K: Capacitance ±10%
					Blank space: Capacitance ±20 %

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±0.2	1.3±0.2

