DIP Aluminum Solid Electrolytic Capacitor - EDEC series

■ Introduction

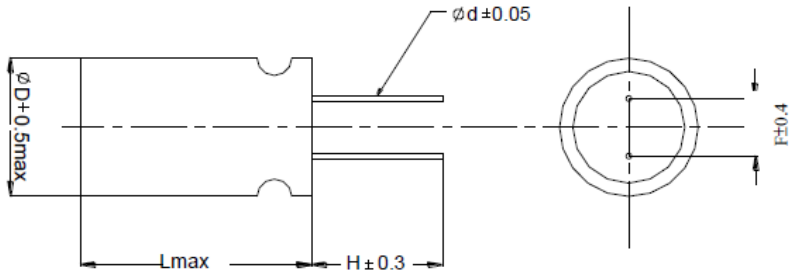
- Super low ESR, High ripple current capability
- Rated voltage: 2.5V ~ 16Vdc
- Endurance: 2,000 hours at 105℃
- Suitable for DC-DC converters, voltage regulators and decoupling applications
- RoHS Compliant

■ Ordering Information

ED	EC	0809	561	M	2R5
1	2	3	4	5	6

1. DIP Type
2. Series Name
3. Dimensions Code
4. Capacitance : **561**=560 µF.
5. Capacitance tolerance： **M**= ± 20%.
6. Working Voltage(WV)： **2R5** = 2.5 VDC ; **160** = 16 VDC.

■ Shape and Dimensions (Unit: mm)



Size code	ϕ D + 0.5max	L max	ϕ d ± 0.05	F ± 0.4	H ± 0.3
0609	6.3	9.0	0.6	2.5	3.2
0809	8.0	9.0	0.6	3.5	3.2
0812	8.0	12.0	0.6	3.5	3.2
1012	10.0	12.0	0.6	5.0	3.2

■ Specifications

ITEMS	CONDITIONS	CHARACTERISTICS	
Category Temperature Range		-55 to +105℃	
Rated Voltage Range		2.5V to 16 Vdc	
Capacitance Tolerance	at 20℃, 120Hz	±20% (M)	
Surge Voltage	15℃ to 35℃	Rated voltage x 1.15V	
Leakage Current	at 20℃ after 2 minutes	Please see the Electrical Characteristics page	
Dissipation Factor (tan δ)	at 20℃, 120Hz	0.1 max.	
Characteristics of Impedance at Low, High Temperature	at -55℃, 100KHz	Z(-55℃) /Z(+20℃) ≦1.25	
	at 105℃ 100KHz	Z(105℃) /Z(+20℃) ≦1.25	
Endurance	The specifications shall be satisfied when the capacitors are restored to 20℃ after the rated voltage is applied for 2,000 hours at 105℃.	Appearance	No significant damage
		Capacitance Change	≦ ±20% of the initial value
		DF (tan δ)	≦150% of the initial specified value
		ESR	≦150% of the initial specified value
		Leakage current	≦The initial specified value
Damp Heat, Steady State	The specifications shall be satisfied when the capacitors are restored to 20℃ after subjecting them to store at 60℃, 90 to 95% RH for 1,000 hours, without DC applied.	Appearance	No significant damage
		Capacitance Change	≦ ±20% of the initial value
		DF (tan δ)	≦150% of the initial specified value
		ESR	≦150% of the initial specified value
		Leakage current	≦The initial specified value
Surge Voltage	The capacitors shall be subjected to 1,000 cycles each consisting of charge with the surge voltages specified at 105℃ for 30 seconds through a protective resistor (R=1kΩ) and discharge for 5 minutes 30 seconds.	Appearance	No significant damage
		Capacitance Change	≦ ±20% of the initial value
		DF (tan δ)	≦150% of the initial specified value
		ESR	≦150% of the initial specified value
		Leakage current	≦The initial specified value

■ Electrical Characteristics

Part No.	Size Code	Cap (μF)	WV/Vdc (SV)	Note(1) Leakage Current (μA)	tan δ	ESR (mΩmax/20℃, 100k to300kHz)	Rated Ripple Current (mArms/ 105℃/100kHz)
EDEC0609-561M-2R5	0609	560	2.5 (2.9)	500	0.1	7	5,000
EDEC0809-561M-2R5	0809	560		500	0.1	7	6,100
EDEC0609-821M-2R5	0609	820		500	0.1	7	5,000
EDEC0809-821M-2R5	0809	820		500	0.1	7	6,100
EDEC0809-102M-2R5	0809	1,000		500	0.1	7	6,100
EDEC0809-122M-2R5	0809	1,200		600	0.1	7	6,100
EDEC0812-152M-2R5	0812	1,500		750	0.1	7	6,100
EDEC1012-152M-2R5	1012	1,500		750	0.1	7	6,640
EDEC1012-222M-2R5	1012	2,200		1,100	0.1	7	6,640
EDEC0609-561M-4R0	0609	560	4 (4.6)	500	0.1	7	5,000
EDEC0809-561M-4R0	0809	560		500	0.1	7	6,100
EDEC1012-122M-4R0	1012	1,200		960	0.1	7	6,640
EDEC0609-471M-6R3	0609	470	6.3 (7.2)	592	0.1	8	4,700
EDEC0809-471M-6R3	0809	470		592	0.1	8	5,700
EDEC0609-561M-6R3	0609	560		705	0.1	8	4,700
EDEC0809-561M-6R3	0809	560		705	0.1	7	6,100
EDEC0809-821M-6R3	0809	820		1,033	0.1	7	6,100
EDEC1012-821M-6R3	1012	820		1,033	0.1	7	6,640
EDEC1012-152M-6R3	1012	1,500		1,890	0.1	7	6,640
EDEC0812-271M-100	0812	270	10 (11.5)	540	0.1	9	5,510
EDEC1012-471M-100	1012	470		940	0.1	9	5,650
EDEC1012-102M-100	1012	1,000		2,000	0.1	9	5,650
EDEC0812-181M-160	0812	180	16 (18.4)	576	0.1	10	5,230
EDEC0809-271M-160	0809	270		864	0.1	10	5,000
EDEC0812-271M-160	0812	270		864	0.1	10	5,230
EDEC0809-331M-160	0809	330		1,056	0.1	10	5,000
EDEC0812-331M-160	0812	330		1,056	0.1	10	5,230
EDEC1012-331M-160	1012	330		1,056	0.1	10	6,100
EDEC0812-471M-160	0812	470		1,505	0.1	10	5,230
EDEC1012-471M-160	1012	470		1,505	0.1	10	6,100
EDEC1012-681M-160	1012	680		2,176	0.1	10	6,100
EDEC1012-821M-160	1012	820		2,624	0.1	10	6,100
EDEC1012-102M-160	1012	1000		3,200	0.1	12	5,400

Note(1). Leakage Current : DC rated voltage shall be applied between anode and cathode lead wire terminations of a capacitor through 1k protective resistance, and the leakage current shall be less than or equal to the value listed in above table after 2 minutes with the voltage reaching the rated value at 20±2℃.
If the value is doubtful, measure the leakage current after performing voltage treatment which shall contain the following steps:
Voltage treatment: (1) DC rated voltage is applied to the capacitors for 60 minutes at 105℃. (2) Cooled down to room temperature with applying voltage. (3) Discharged through a resistor of approximately 1Ω/V.