Type EDC, 70 ºC Long Life Electric Double Layer Supercapacitor



Type EDC, 70 ºC electric double layer supercapacitors offer high capacitance values in a thru hole stacked coin type package. Primarily designed for integrated circuit voltage backup, the capacitors can also be used to deliver the initial power from batteries.

Highlights

- Long life
- High discharge current
- 70 ºC Operating temperature

Specifications

Operating Temperature Range	–25 ºC to +70 ºC
Rated Voltage Range	5.5 Vdc to 6.3 Vdc
Capacitance Range	0.047 F to 1.5 F
Life, Moisture and Temperature Characteristics	After the following procedures have been performed, measure the capacitance and ESR at +20 ºC.
Life Test:	Apply the max. operating voltage for 1000 h at +70 ºC
Capacitance Change **ESR**	±30% of the initial measured value ≤ 4 times the initial specified value
Shelf Life:	Subject the capacitor to 1000 hours without voltage at +70 ºC.
Capacitance Change **ESR**	±30% of the initial measured value ≤ 4 times the initial specified value
Moisture Resistance:	Subject the capacitor to 240 hours at +40 ºC at 90 to 95% RH without voltage.
Capacitance Change **ESR**	±30% of the initial measured value ≤ 3 times the initial specified value

Temperature Cycling	Stabilize the capacitor at each of the following temperatures for 1 hour in sequence, and then measure the capacitance and ESR at that temperature.
	1. +20 ºC 2. -25 ºC 3. +20 ºC 4. +70 ºC 5. +20 ºC
Capacitance Change (at -25 ºC) **ESR (at -25 ºC)** **Capacitance Change (at +85 ºC)** **ESR (at +85 ºC)** **Capacitance Change (Step 5 at +20 ºC)** **ESR (Step 5 at +20 ºC)**	±30% of the initial measured value ≤ 5 times the initial measured value ±30% of the initial measured value ≤ 4 times the initial measured value ±10% of the initial measured value meets the initial specified value
Regulatory Information	

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5.5 VDC					
CDE Part Number	Cap F	ESR 1 kHz Ω	Case Code		
			V Type	H Type	C Type
EDC473Z5R5*	0.047	120	V1	H1	C1
EDC104Z5R5*	0.1	75	V1	H1	C1
EDC224Z5R5*	0.22	75	V1	H1	C1
EDC334Z5R5*	0.33	75	V1	H1	C1
EDC474Z5R5*	0.47	50	V1	H1	C1
EDC105Z5R5*	1	30	V2	H2	C2
EDC155Z5R5*	1.5	30	V2	H2	C2

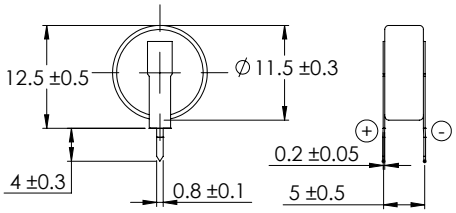
*V, H, or C

6.3 VDC			
CDE Part Number	Cap F	ESR 1 kHz Ω	Case Code
EDC104Z6R3C	0.1	120	C3
EDC224Z6R3C	0.22	75	C3
EDC334Z6R3C	0.33	75	C3
EDC474Z6R3C	0.47	50	C4
EDC684Z6R3C	0.68	50	C4
EDC105Z6R3C	1	30	C4

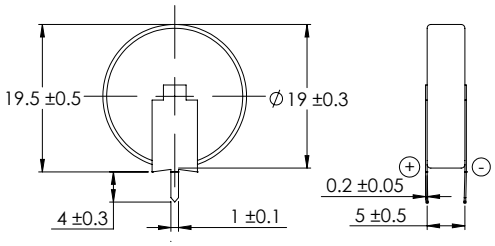
Part Numbering System

EDC	224	Z	5R5	C
Series	Capacitance	Tolerance	Voltage	Case Style
	224 = 0.22 F 473 = 0.047 F 105 = 1.0 F	-20/+80%	5R5 = 5.5 Vdc	C = Radial H = Horizontal Style V = Vertical Style

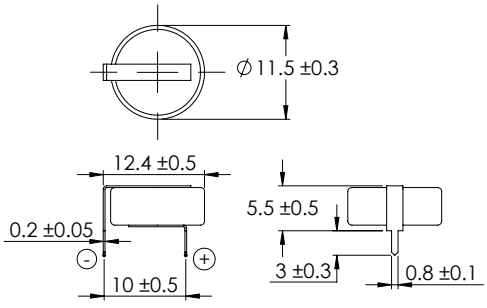
EDC Outline Drawing



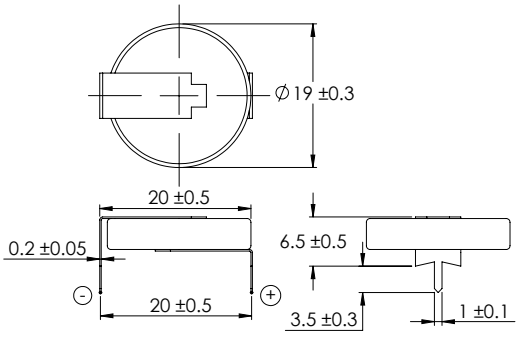
V1



V2



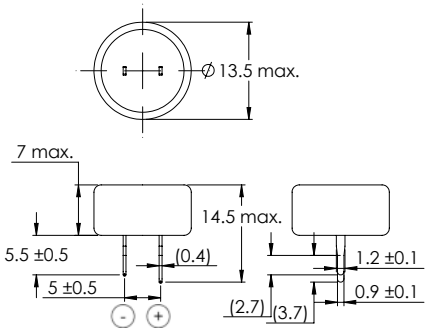
H1



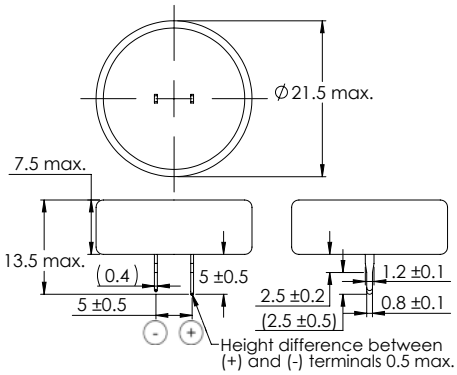
H2

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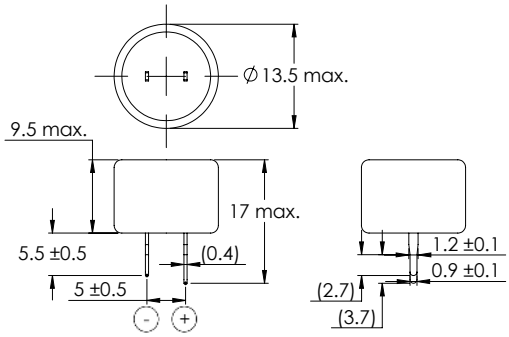
EDC Outline Drawing



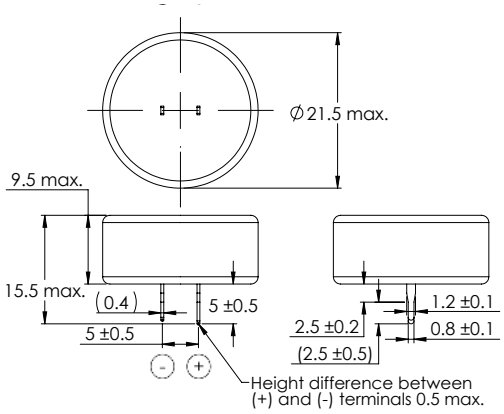
C1



C2



C3



C4

Recommended Soldering Procedures	
Hand Soldering	Use a 30W iron with a max. temperature of 350 ºC for 3 seconds.
Wave Soldering	Pre-heat circuit board to a surface temp of 110 ºC for a max. of 60 seconds, with a max. component temperature of 100 ºC. Min. printed circuit board thickness of 0.8 mm. Recommended solder bath temperature of 240 ºC with a max. dipping time of 5 seconds.

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