Type EDS, 85 ºC Long Life Electric Double Layer Supercapacitor

Type EDS, 85 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
- 85 ºC Operating temperature

Specifications

Operating Temperature Range	–25 ºC to +85 ºC
Rated Voltage Range	3.6 Vdc to 5.5 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 +85 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 +85 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**	±10% of the initial measured value meets 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. +85 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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3.6 VDC					
CDE Part Number	Cap F	ESR 1 kHz Ω	Case Code		
			V Type	H Type	C Type
EDS473Z3R6*	0.047	120	V1	H1	C1
EDS104Z3R6*	0.1	75	V1	H1	C1
EDS224Z3R6*	0.22	75	V1	H1	C1
EDS334Z3R6*	0.33	75	V1	H1	C1
EDS474Z3R6*	0.47	50	V1	H1	C1
EDS105Z3R6*	1	30	V2	H2	C2
EDS155Z3R6*	1.5	30	V2	H2	C2

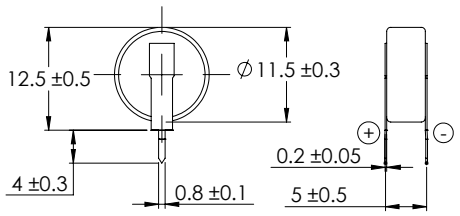
*V, H, or C

5.5 VDC			
CDE Part Number	Cap F	ESR 1 kHz Ω	Case Code
EDS104Z5R5C	0.1	120	C3
EDS224Z5R5C	0.22	75	C3
EDS334Z5R5C	0.33	75	C3
EDS474Z5R5C	0.47	50	C4
EDS684Z5R5C	0.68	50	C4
EDS105Z5R5C	1	30	C4

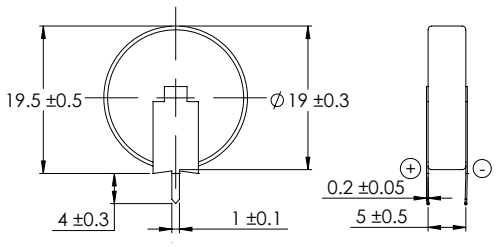
Part Numbering System

EDS	224	Z	5R5	C
Series	Capacitance	Tolerance	Voltage	Case
	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

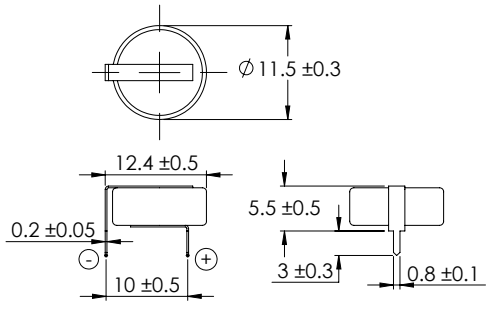
EDS Outline Drawing



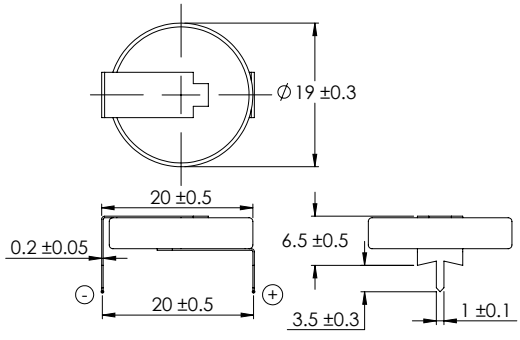
V1



V2



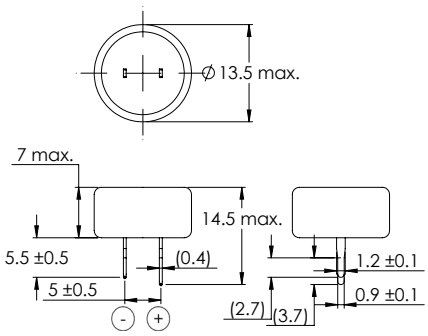
H1



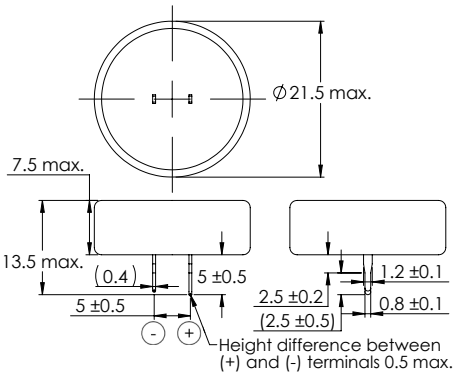
H2

Type EDS, 85 ºC Long Life Electric Double Layer Supercapacitor

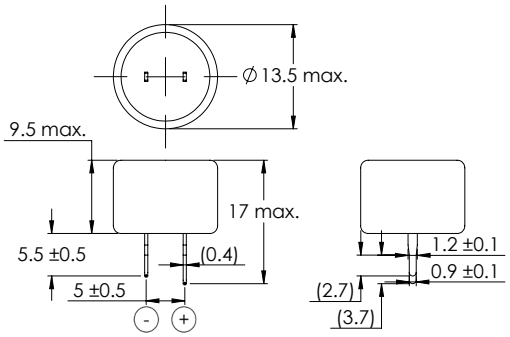
EDS Outline Drawing



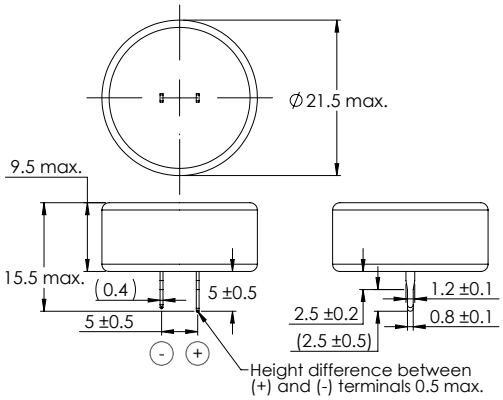
C1



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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