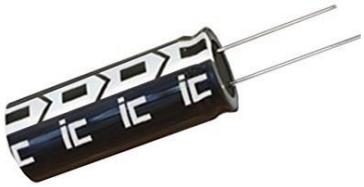
VMF

Hybrid LIC Supercapacitor



FEATURES

High Voltage – Very Fast Charge/Discharge – High Power Density – RoHS Compliant

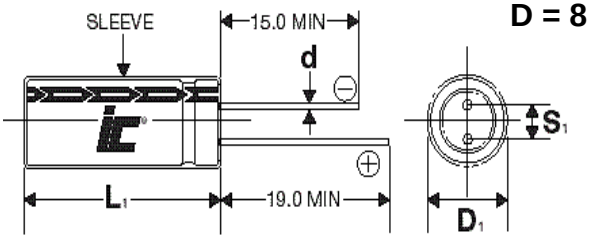
APPLICATIONS

Solar/Wind Energy Storage – Pulse Power – Energy Harvesting – UPS Systems – Smart Electric Meters

Operating Temperature Range		**-15°C to +85°C**		
Storage Temperature		**-40°C to +70°C**		
Capacitance Tolerance @ 25°C		**±20%**		
Voltage (Vdc) (+70°C/+85°C)	**WVDC**	**3.8**	**3.8V / 3.5V**	
	SVDC	**4.2**		
	Minimum	**2.2**		
Life Time		**1000 hours with rated voltage applied at 70°C**		
		Capacitance change	±50% of initially measured values	
		ESR	<1000% of initially specified values	
		Leakage current	≤100% specified maximum value	
Shelf Life		**1000 hours with no voltage applied at 70°C**		
		Capacitance change	±30% of initially measured values	
		ESR	<200% of initially specified values	
Life Cycles (25°C) 1 cycle = Charge / Discharge from 3.8~2.5VDC		**500,000 cycles**		
		Capacitance change	±30% of initially measured values	
		ESR change	<200% of initially specified values	

RoHS Compliant

810a Recognized



D = 8 to 16mm

Lead spacing VS. Case diameter				
D	**8**	**10**	**12.5**	**16**
S	3.5	5.0	5.0	7.5
d	0.6	0.6	0.6	0.8
α	1.5	2.0	2.0	2.0

L_1=L+α mm
D_1=D+05mm
S_1=S±0.5mm

Notes

1. Maintain balanced voltages when used in multiple series or parallel connections. (Consult CDE engineering for guidance)
2. When using metal tooling, trim and bend leads separately. Parts store a charge. Avoid shorting leads. (Consult CDE engineering for guidance)
3. Manual soldering temperature should not exceed 350°C and soldering time should not exceed 4 seconds. (Wave and reflow soldering not recommended)

Full Material Handling Guidelines

Americas / EU
Phone: 1-508-996-8561
Email: cdena@cde.com

CDE ENERGIZING IDEAS
CORNELL DUBILIER
ILLINOIS CAPACITOR

Asia
Phone: 852-2793-0931
Email: cdeasia@cde.com

VMF

High pulse power, extends battery life

WVDC	Capacitance (F)	IC PART NUMBER	Weight (grams)	Volume (mL)	Dims DxL LxHxT (mm)	Lead Spacing S (mm)	Lead Diameter d (mm)
3.8	10.0	VMF106M3R8	1.4	0.703	8x14	3.5	0.6
3.8	25.0	VMF256M3R8	1.8	1.01	8x20	3.5	0.6
3.8	30.0	VMF306M3R8	2.2	1.26	8x25	3.5	0.6
3.8	40.0	VMF406M3R8	2.5	1.26	10x16	5	0.6
3.8	50.0	VMF506M3R8	3.2	1.57	10x20	5	0.6
3.8	70.0	VMF706M3R8	3.8	1.96	10x25	5	0.6
3.8	120.0	VMF127M3R8	5.4	3.07	12.5x25	5	0.6
3.8	220.0	VMF227M3R8	9.4	5.03	16x25	7.5	0.8

WVDC	Capacitance (F)	IC PART NUMBER	MAX Current (A) (1 Sec.)	Maximum Continuous Current (A) (ΔT=15°C)	Short Circuit Current (A)	ESR AC 1 kHz (mΩ)	DC ESR (mΩ) 20°C	Max stored energy (mWh)	LC (µA), (72 hrs)
3.8	10.0	VMF106M3R8	0.5	0.05	2.53	500	1500	13.33	2
3.8	25.0	VMF256M3R8	0.8	0.125	5.85	300	650	33.33	2.5
3.8	30.0	VMF306M3R8	0.9	0.15	5.43	250	700	40	3
3.8	40.0	VMF406M3R8	1	0.15	6.91	250	550	53.33	3
3.8	50.0	VMF506M3R8	1.5	0.2	8.44	200	450	66.67	4
3.8	70.0	VMF706M3R8	3	0.35	8.44	100	250	93.33	5
3.8	120.0	VMF127M3R8	5	0.6	19	80	200	160	7
3.8	220.0	VMF227M3R8	8	1.1	38	60	100	293.3	12

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Phone: 1-508-996-8561
Email: cdena@cde.com

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Asia
Phone: 852-2793-0931
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