

FEATURES

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

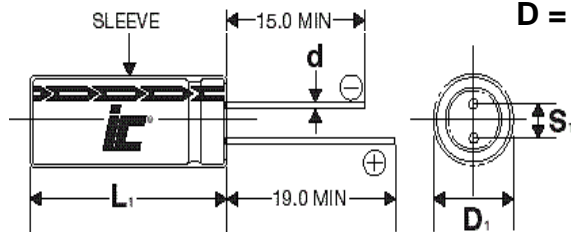
APPLICATIONS

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	2.5	
Life Time	1000 hours with rated voltage applied at 70°C		
	Capacitance change	±30% of initially measured values	
	ESR	<200% 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

$$L_1 = L + \alpha \text{ mm}$$

$$D_1 = D + 0.5 \text{ mm}$$

$$S_1 = S \pm 0.5 \text{ mm}$$

Notes

- Maintain balanced voltages when used in multiple series or parallel connections. (Consult CDE engineering for guidance)
- When using metal tooling, trim and bend leads separately. Parts store a charge. Avoid shorting leads. (Consult CDE engineering for guidance)
- 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](#)

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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) ($\Delta T=15^{\circ}C$)	Short Circuit Current (A)	ESR AC 1 kHz (m Ω)	DC ESR (m Ω) 20°C	Max stored energy (mWh)	LC (μA), (72 hrs)
3.8	10.0	VMF106M3R8	0.5	0.05	2.53	500	1500	11	2
3.8	25.0	VMF256M3R8	0.8	0.125	5.85	300	650	28	2.5
3.8	30.0	VMF306M3R8	0.9	0.15	5.43	250	700	34	3
3.8	40.0	VMF406M3R8	1	0.15	6.91	250	550	46	3
3.8	50.0	VMF506M3R8	1.5	0.2	8.44	200	450	57	4
3.8	70.0	VMF706M3R8	3	0.35	15.2	100	250	80	5
3.8	120.0	VMF127M3R8	5	0.6	19	80	200	137	7
3.8	220.0	VMF227M3R8	8	1.1	38	60	100	250	12