

### FEATURES

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

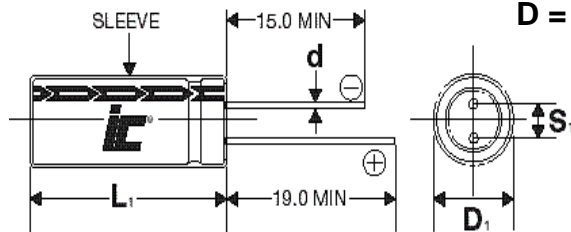
### APPLICATIONS

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

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

$L_1 = L + \alpha$  mm  
 $D_1 = D + 0.5$  mm  
 $S_1 = S \pm 0.5$  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 DxDL LxHxT (mm)	Lead Spacing S (mm)	Lead Diameter d (mm)
3.8	10.0	<a href="#">VMF106M3R8</a>	1.4	0.703	8x14	3.5	0.6
3.8	25.0	<a href="#">VMF256M3R8</a>	1.8	1.01	8x20	3.5	0.6
3.8	30.0	<a href="#">VMF306M3R8</a>	2.2	1.26	8x25	3.5	0.6
3.8	40.0	<a href="#">VMF406M3R8</a>	2.5	1.26	10x16	5	0.6
3.8	50.0	<a href="#">VMF506M3R8</a>	3.2	1.57	10x20	5	0.6
3.8	70.0	<a href="#">VMF706M3R8</a>	3.8	1.96	10x25	5	0.6
3.8	120.0	<a href="#">VMF127M3R8</a>	5.4	3.07	12.5x25	5	0.6
3.8	220.0	<a href="#">VMF227M3R8</a>	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 $\Omega$ )	DC ESR (m $\Omega$ ) 20°C	Max stored energy (mWh)	LC ( $\mu A$ ), (72 hrs)
3.8	10.0	<a href="#">VMF106M3R8</a>	0.5	0.05	2.53	500	1500	13.33	2
3.8	25.0	<a href="#">VMF256M3R8</a>	0.8	0.125	5.85	300	650	33.33	2.5
3.8	30.0	<a href="#">VMF306M3R8</a>	0.9	0.15	5.43	250	700	40	3
3.8	40.0	<a href="#">VMF406M3R8</a>	1	0.15	6.91	250	550	53.33	3
3.8	50.0	<a href="#">VMF506M3R8</a>	1.5	0.2	8.44	200	450	66.67	4
3.8	70.0	<a href="#">VMF706M3R8</a>	3	0.35	8.44	100	250	93.33	5
3.8	120.0	<a href="#">VMF127M3R8</a>	5	0.6	19	80	200	160	7
3.8	220.0	<a href="#">VMF227M3R8</a>	8	1.1	38	60	100	293.3	12