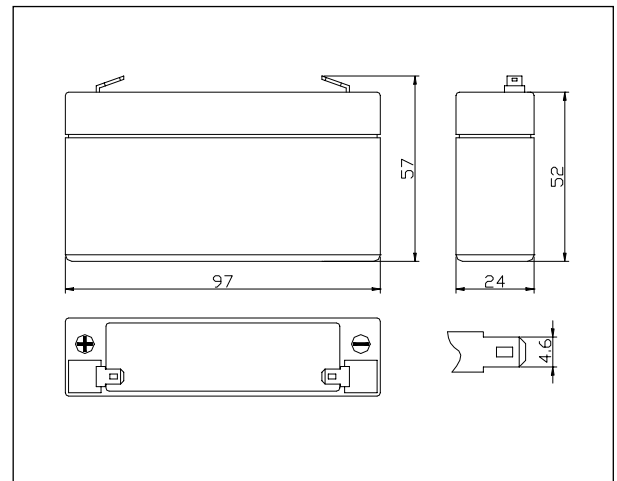




# Sealed Lead-Acid Battery

# FM613

## Outer Dimensions



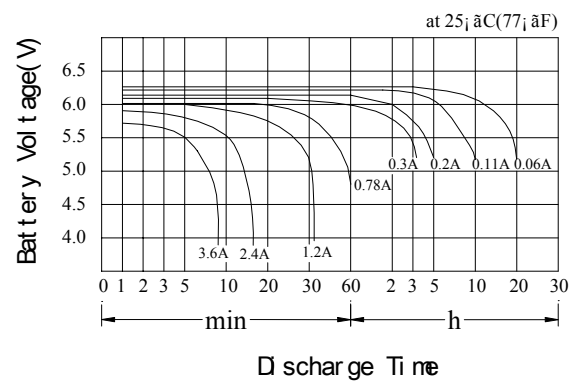
## Characteristics

Nominal Voltage		6V
Nominal Capacity (20hour rate)		1.3Ah
Capacity 25°C(77°F)	20 hour rate (0.065A)	1.3Ah
	10 hour rate (0.112A)	1.12Ah
	5 hour rate (0.204A)	1.02Ah
	1 hour rate (0.78A)	0.78Ah
Internal Resistance	Full Charged Battery 25°C (77°F)	60mΩ
Cyclic Life	50%(C <sub>20</sub> ) Depth of discharge	600Times
Float Life	25°C(77°F) Float charge at 6.9V	About 5 Years
Capacity affected by Temperature (20 hour)	40°C (104°F)	102%
	25°C (77°F)	100%
	0°C (32°F)	85%
	-15°C (5°F)	65%
Self-Discharge 25°C(77°F)	Capacity after 3 month storage	90%
	Capacity after 6 month storage	80%
	Capacity after 12 month storage	62%
Charge (Constant Voltage) 25°C(77°F)	Cycle	Initial Charging Current Less than 0.36A Voltage 7.3-7.5V
	Float	Voltage 6.75-6.90V

## Packing

Dimensions (L×W×H)	285×210×136mm
Quantity Per Box	40 Pcs
Net weight Per Cell	0.31Kg
Net weight Per Box	12.4 Kg
Gross Weight	13.2 Kg

## Discharge Curve



## Discharge Characteristics of Constant Current and Power 25°C(77°F)

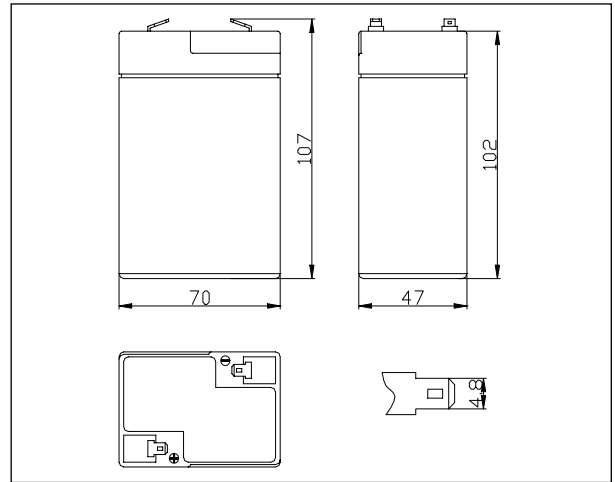
Time	Constant current discharge Characteristics (A) (25°C/77°F)				Constant power discharge Characteristics (W) (25°C/77°F)			
	3.6A	2.4A	1.2A	0.78A	18.14	19.44	23.33	25.92
1min	3.36	3.60	4.32	4.80	18.14	19.44	23.33	25.92
5min	3.00	3.36	3.84	4.20	16.4	18.3	21.0	22.9
15min	1.92	2.04	2.16	2.40	10.6	11.3	11.9	13.2
30min	1.08	1.25	1.32	1.44	6.03	6.96	7.37	8.04
45min	0.94	0.95	0.96	0.98	5.34	5.40	5.47	5.61
1hr	0.74	0.76	0.77	0.78	4.29	4.35	4.42	4.49
2hr	0.396	0.408	0.414	0.420	2.281	2.350	2.385	2.419
3hr	0.288	0.296	0.300	0.304	1.668	1.714	1.737	1.760
5hr	0.202	0.204	0.204	0.206	1.167	1.181	1.181	1.195
8hr	0.134	0.134	0.135	0.135	0.777	0.777	0.786	0.786
10hr	0.109	0.112	0.113	0.113	0.636	0.650	0.656	0.656
20hr	0.059	0.060	0.061	0.061	0.342	0.349	0.356	0.356
Final Voltage (V)	5.4	5.25	5.10	4.80	5.4	5.25	5.10	4.80



# Sealed Lead-Acid Battery

# FM645

## Outer Dimensions



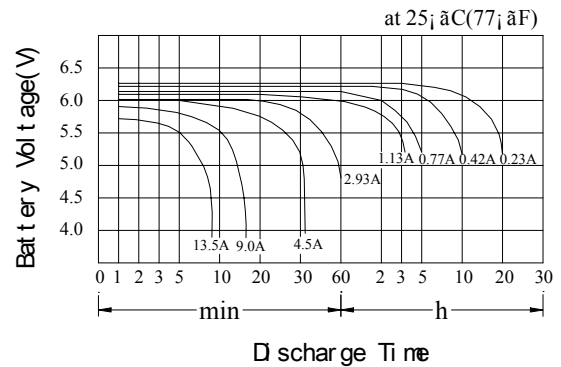
## Characteristics

Nominal Voltage		6V
Nominal Capacity (20hour rate)		4.5Ah
Capacity 25°C (77°F)	20 hour rate (0.225A)	4.5Ah
	10 hour rate (0.419A)	4.19Ah
	5 hour rate (0.765A)	3.83Ah
	1 hour rate (2.93A)	2.93Ah
Internal Resistance	Full Charged Battery 25°C (77°F)	25mΩ
Cyclic Life	50%(C <sub>20</sub> ) Depth of discharge	600Times
Float Life	25°C (77°F) Float charge at 6.9V	About 5 Years
Capacity affected by Temperature (20 hour)	40°C (104°F)	102%
	25°C (77°F)	100%
	0°C (32°F)	85%
	-15°C (5°F)	65%
Self-Discharge 25°C (77°F)	Capacity after 3 month storage	90%
	Capacity after 6 month storage	80%
	Capacity after 12 month storage	62%
Charge (Constant Voltage) 25°C (77°F)	Cycle	Initial Charging Current Less than 1.35A Voltage 7.3-7.5V
	Float	Voltage 6.75-6.90V

## Packing

Dimensions (L×W×H)	360×190×125mm
Quantity Per Box	20 Pcs
Net weight Per Cell	0.75 Kg
Net weight Per Box	15.0 Kg
Gross Weight	15.4 Kg

## Discharge Curve



## Discharge Characteristics of Constant Current and Power 25°C (77°F)

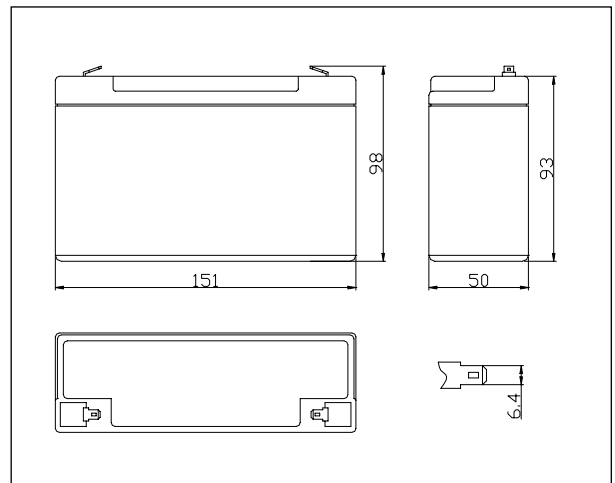
Time	Constant current discharge Characteristics (A) (25°C/77°F)				Constant power discharge Characteristics (W) (25°C/77°F)			
	1.35A	0.90A	0.45A	0.23A	68.0	72.9	87.5	97.2
1min	12.6	13.5	16.2	18.0	68.0	72.9	87.5	97.2
5min	11.3	12.6	14.4	15.8	61.4	68.8	78.6	86.0
15min	7.20	7.65	8.10	9.00	39.7	42.2	44.7	49.7
30min	4.05	4.68	4.95	5.40	22.6	26.1	27.6	30.1
45min	3.51	3.56	3.60	3.69	20.0	20.3	20.5	21.0
1hr	2.79	2.84	2.88	2.93	16.1	16.3	16.6	16.8
2hr	1.49	1.53	1.55	1.58	8.55	8.81	8.94	9.07
3hr	1.08	1.11	1.13	1.14	6.25	6.43	6.51	6.60
5hr	0.756	0.765	0.765	0.774	4.377	4.429	4.429	4.48
8hr	0.501	0.501	0.506	0.506	2.914	2.914	2.946	2.95
10hr	0.410	0.419	0.423	0.423	2.383	2.436	2.462	2.46
20hr	0.221	0.225	0.230	0.230	1.283	1.310	1.336	1.34
Final Voltage (V)	5.4	5.25	5.10	4.80	5.4	5.25	5.10	4.80



# Sealed Lead-Acid Battery

# FM6120

## Outer Dimensions



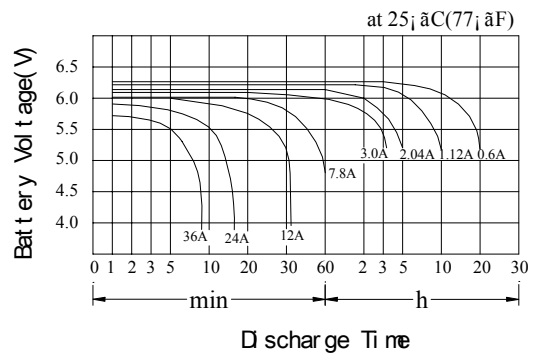
## Characteristics

Nominal Voltage		6V
Nominal Capacity (20hour rate)		12Ah
Capacity 25°C (77°F)	20 hour rate (0.6A)	12Ah
	10 hour rate (1.12A)	11.2Ah
	5 hour rate (2.04A)	10.2Ah
	1 hour rate (7.8A)	7.8Ah
Internal Resistance	Full Charged Battery 25°C (77°F)	15mΩ
Cyclic Life	50%(C <sub>20</sub> ) Depth of discharge	600Times
Float Life	25°C (77°F) Float charge at 6.9V	About 5 Years
Capacity affected by Temperature (20 hour)	40°C (104°F)	102%
	25°C (77°F)	100%
	0°C (32°F)	85%
	-15°C (5°F)	65%
Self-Discharge 25°C (77°F)	Capacity after 3 month storage	90%
	Capacity after 6 month storage	80%
	Capacity after 12 month storage	62%
Charge (Constant Voltage) 25°C (77°F)	Cycle	Initial Charging Current Less than 3.6A Voltage 7.3-7.5V
	Float	Voltage 6.75-6.90V

## Packing

Dimensions (L×W×H)	320×275×118mm
Quantity Per Box	10 Pcs
Net weight Per Cell	2.0 Kg
Net weight Per Box	20 Kg
Gross Weight	20.5 Kg

## Discharge Curve



## Discharge Characteristics of Constant Current and Power 25°C (77°F)

Time	Constant current discharge Characteristics (A) (25°C/77°F)				Constant power discharge Characteristics (W) (25°C/77°F)			
	36A	24A	12A	7.8A	181	194	233	259
1min	33.6	36.0	43.2	48.0	181	194	233	259
5min	30.0	33.6	38.4	42.0	164	183	210	229
15min	19.2	20.4	21.6	24.0	106	113	119	132
30min	10.8	12.5	13.2	14.4	60.3	69.6	73.7	80.4
45min	9.36	9.48	9.60	9.84	53.4	54.0	54.7	56.1
1hr	7.44	7.56	7.68	7.80	42.9	43.5	44.2	44.9
2hr	3.96	4.08	4.14	4.20	22.8	23.5	23.8	24.2
3hr	2.88	2.96	3.00	3.04	16.7	17.1	17.4	17.6
5hr	2.02	2.04	2.04	2.06	11.7	11.8	11.8	12.0
8hr	1.34	1.34	1.35	1.35	7.77	7.77	7.86	7.86
10hr	1.09	1.12	1.13	1.13	6.36	6.50	6.56	6.56
20hr	0.59	0.60	0.61	0.61	3.42	3.49	3.56	3.56
Final Voltage (V)	5.4	5.25	5.10	4.80	5.4	5.25	5.10	4.80

### FM Series

FM (General Models) Series Valve Regulated Lead Acid batteries are designed with AGM (Absorbent Glass Mat) technology, high performance plates and electrolyte to gain extra power output for common power backup system applications widely used in the field of UPS, Emergency Lighting System.

### Application

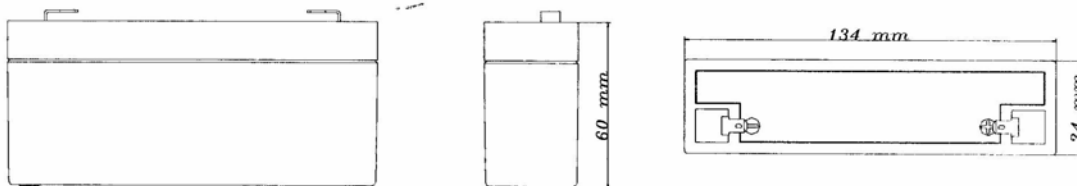
- Alarm System
- Cable Television
- Communication Equipment
- Control Equipment
- Security System
- Medical Equipment
- UPS
- Power tools
- Emergency Power System
- Toys

### General Features

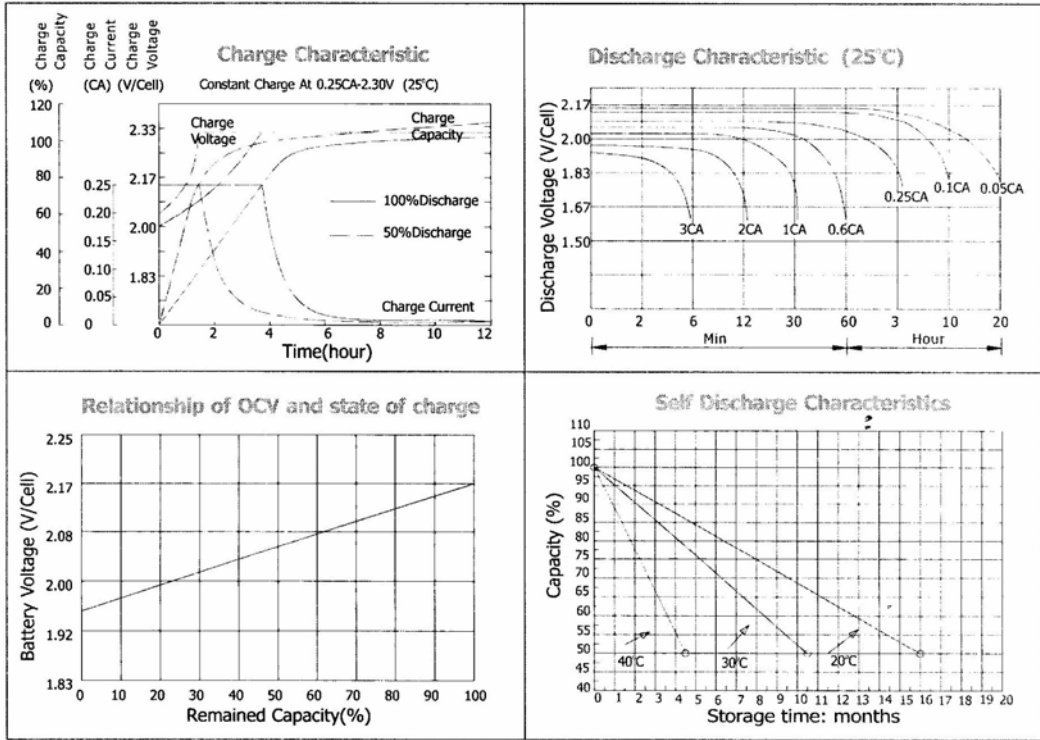
- Sealed and maintenance free operation.
- Non-Spillable construction design.
- ABS containers and covers (UL94HB, UL94V-0) optional.
- Safety valve installation for explosion proof.
- High quality and high reliability.
- Exceptional deep discharge recovery performance.
- Low self discharge characteristic.
- Flexibility design for multiple install positions.

### Construction

- Component .....Raw material
- Positive .....Lead dioxide
- Negative .....Lead
- Container .....ABS
- Cover .....ABS
- Sealant .....Epoxy Resin
- Safety valve .....EPDR
- Terminal .....Pb Alloy
- Separator .....Fiber glass
- Electrolyte .....Sulfuric acid



Battery Model	Fm632			
Designed Floating Life	5 Years			
Capacity(25°C)	20HR(1.73A,1.75V)	10HR(3.3A,1.75V)	5HR(5.9A,1.75V)	1HR(21A,1.75V)
	3.2AH	3.0AH	2.9AH	2.0AH
Dimensions	Length	Width	Height	Total Height
	134mm	34mm	60mm	65mm
Approx. Weight	0.62Kg			
Internal Resistance	Full charged at 25°C: 30 Ohm			
Self Discharge	3% of capacity declined per month at (25°C)			
Capacity Affected by Temp.(20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage(25°C)	Cycle use		Float use	
	7.2-7.5V, max. Current: 1.0A		6.8-6.9V	



Constant current discharge ratings-amperes at 25°C

F.V/Time	5MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
4.8V	12.5	7	3.6	2.2	0.80	0.60	0.32	0.17
5.1V	11.2	6.3	3.2	2.0	0.76	0.58	0.31	0.17
5.25V	9.6	5.6	2.8	1.8	0.72	0.56	0.30	0.17
5.40V	8.6	5	2.5	1.7	0.69	0.54	0.30	0.17

Constant power discharge ratings-watts at 25°C

F.V/Time	5MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR
4.8V	66	39	22	13.5	5.0	3.9	2.2	1.10
5.10V	58	36	20	12.1	4.7	3.8	2.1	1.10
5.25V	50	32	18	10.6	4.4	3.7	2.1	1.10
5.40V	45	28	16	9.5	4.0	3.6	2.0	1.10



FOSHAN SANSHUI JIN POWER BATTERY., LTD.

### FM Series

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### Application

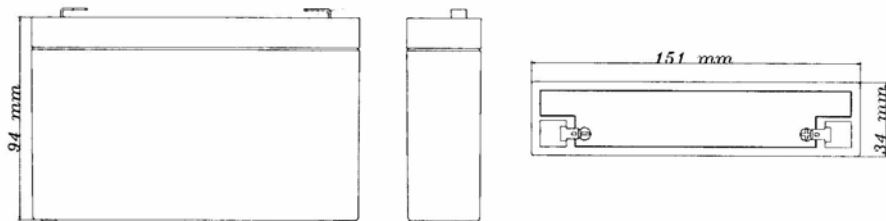
- Alarm System
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- Security System
- Medical Equipment
- UPS
- Power tools
- Emergency Power System
- Toys

### General Features

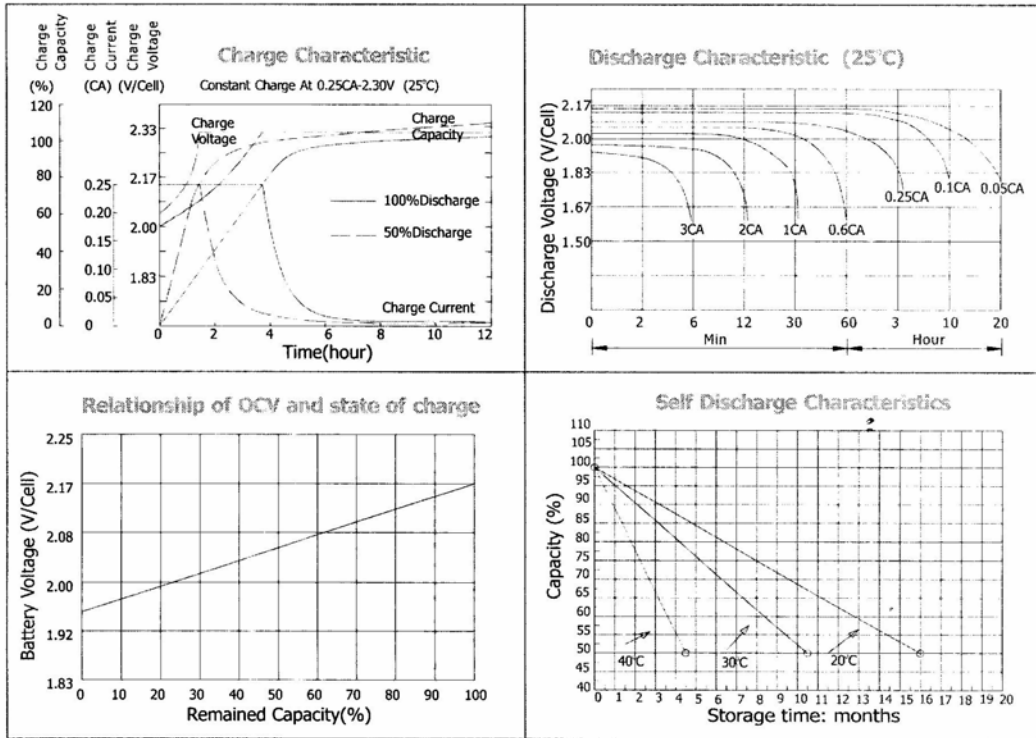
- Sealed and maintenance free operation.
- Non-Spillable construction design.
- ABS containers and covers (UL94HB, UL94V-0) optional.
- Safety valve installation for explosion proof.
- High quality and high reliability.
- Exceptional deep discharge recovery performance.
- Low self discharge characteristic.
- Flexibility design for multiple install positions.

### Construction

- Component .....Raw material
- Positive .....Lead dioxide
- Negative .....Lead
- Container .....ABS
- Cover .....ABS
- Sealant .....Epoxy Resin
- Safety valve .....EPDR
- Terminal .....Pb Alloy
- Separator .....Fiber glass
- Electrolyte .....Sulfuric acid



Battery Model	Fm670			
Designed Floating Life	5 Years			
Capacity(25°C)	20HR(1.73A,1.75V)	10HR(3.3A,1.75V)	5HR(5.9A,1.75V)	1HR(21A,1.75V)
	7.0AH	6.5AH	6.2AH	4.2AH
Dimensions	Length	Width	Height	Total Height
	151mm	34mm	94mm	98mm
Approx. Weight	1.1Kg			
Internal Resistance	Full charged at 25°C: 20 Ohm			
Self Discharge	3% of capacity declined per month at (25°C)			
Capacity Affected by Temp.(20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage(25°C)	Cycle use		Float use	
	7.2-7.5V, max. Current:2.1A		6.8-6.9V	



Constant current discharge ratings-amperes at 25°C

F.V/Time	5MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR	
4.8V	23	13	7.0	4.2	1.75	1.20	0.65	0.35	
5.1V	21	12.5	6.6	4.0	1.70	1.18	0.64	0.35	
5.25V	19	12	6.2	3.8	1.65	1.15	0.63	0.34	
5.40V	17.5	11.4	5.7	3.6	1.61	1.13	0.62	0.34	

Constant power discharge ratings-watts at 25°C

F.V/Time	5MIN	15MIN	30MIN	1HR	3HR	5HR	10HR	20HR	
4.8V	130	75	45	26.2	10.3	6.9	3.8	2.00	
5.10V	120	68	42	25.0	10.0	6.8	3.7	2.00	
5.25V	108	61	39	23.5	9.8	6.7	3.6	1.95	
5.40V	95	52	35	21.2	9.6	6.6	3.5	1.92	



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