



6FM2.9 (12V2.9Ah)

6FM2.9 is a general purpose battery with 5 years life in standby service, or more than 260 cycles at 100% D.O.D by cyclic use. As with all QiangJun batteries, all FM models are rechargeable, highly efficient, leak proof and maintenance free.

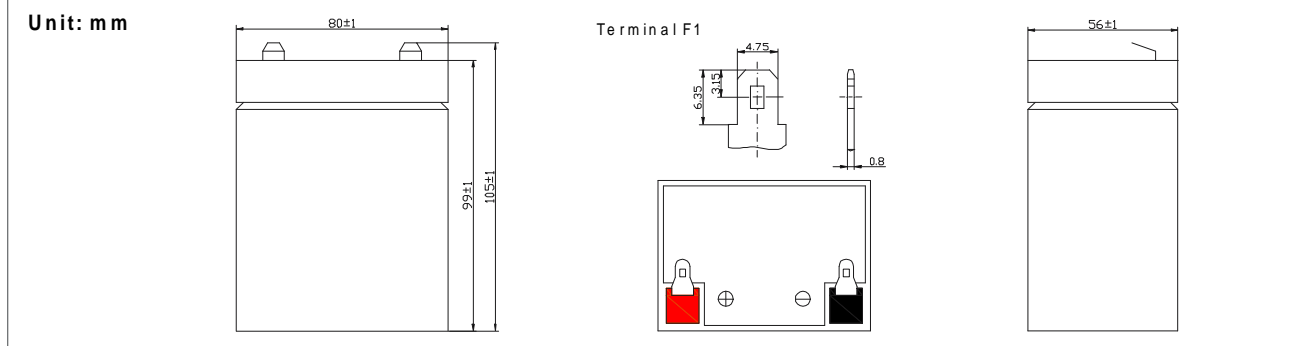


Specification

| | |
|--|---|
| Cells Per Unit | 6 |
| Voltage Per Unit | 12 |
| Capacity | 2.9Ah@ 20hr-rate to 1.75V per cell @ 25°C |
| Weight | Approx. 1.1 Kg |
| Max. Discharge Current | 29 A (5 sec) |
| Internal Resistance | Approx. 45 m |
| Operating Temperature Range | Discharge: -20°C~60°C Charge: 0°C~50°C Storage: -20°C~60°C |
| Normal Operating Temperature Range | 25°C±5°C |
| Float charging Voltage | 13.6 to 13.8 VDC/unit Average at 25°C |
| Recommended Maximum Charging Current Limit | 0.87 A |
| Equalization and Cycle Service | 14.4 to 15.0 VDC/unit Average at 25°C |
| Self Discharge | QiangJun batteries can be stored for more than 6 months at 25°C. Please charge batteries before using. For higher temperature, the time interval will be shorter. |
| Terminal | Faston Tab 187(F1) |
| Container Material | A.B.S. (UL94-HB) Flammability resistance of UL94-V2 can be available upon request. |



Dimensions



Constant Current Discharge Characteristics Unit: A(25°C)

| F.V/Time | 5MIN | 10MIN | 15MIN | | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|----------|-------|-------|-------|------|------|------|------|------|------|------|------|------|
| 1.60V | 12.04 | 8.05 | 6.19 | 3.40 | 2.01 | 1.21 | 0.74 | 0.61 | 0.49 | 0.36 | 0.28 | 0.16 |
| 1.67V | 11.27 | 7.51 | 5.81 | 3.35 | 2.00 | 1.20 | 0.74 | 0.61 | 0.49 | 0.36 | 0.28 | 0.15 |
| 1.70V | 10.66 | 7.28 | 5.68 | 3.32 | 1.99 | 1.19 | 0.74 | 0.60 | 0.48 | 0.36 | 0.28 | 0.15 |
| 1.75V | 9.63 | 6.81 | 5.39 | 3.25 | 1.96 | 1.18 | 0.73 | 0.60 | 0.48 | 0.36 | 0.28 | 0.15 |
| 1.80V | 8.60 | 6.35 | 5.09 | 3.17 | 1.93 | 1.16 | 0.73 | 0.60 | 0.48 | 0.36 | 0.27 | 0.14 |
| 1.85V | 7.58 | 5.88 | 4.79 | 3.09 | 1.90 | 1.14 | 0.72 | 0.59 | 0.48 | 0.36 | 0.27 | 0.14 |

Constant Power Discharge Characteristics Unit: W(25°C)

| F.V/Time | 5MIN | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR | 4HR | 5HR | 8HR | 10HR | 20HR |
|----------|------|-------|-------|-------|------|------|------|------|------|------|------|------|
| 1.60V | 23.2 | 15.1 | 12.3 | 6.80 | 4.02 | 2.41 | 1.48 | 1.21 | 1.15 | 0.72 | 0.57 | 0.32 |
| 1.67V | 21.8 | 14.5 | 11.6 | 6.69 | 4.01 | 2.40 | 1.48 | 1.21 | 1.14 | 0.72 | 0.56 | 0.30 |
| 1.70V | 21.3 | 14.1 | 11.4 | 6.65 | 4.00 | 2.39 | 1.48 | 1.21 | 1.14 | 0.72 | 0.55 | 0.30 |
| 1.75V | 19.3 | 13.5 | 10.8 | 6.49 | 3.94 | 2.35 | 1.47 | 1.20 | 1.14 | 0.71 | 0.55 | 0.29 |
| 1.80V | 17.2 | 12.6 | 10.2 | 6.34 | 3.87 | 2.32 | 1.46 | 1.19 | 1.13 | 0.71 | 0.54 | 0.28 |
| 1.85V | 15.2 | 11.7 | 9.6 | 6.18 | 3.80 | 2.29 | 1.44 | 1.18 | 1.13 | 0.71 | 0.53 | 0.27 |

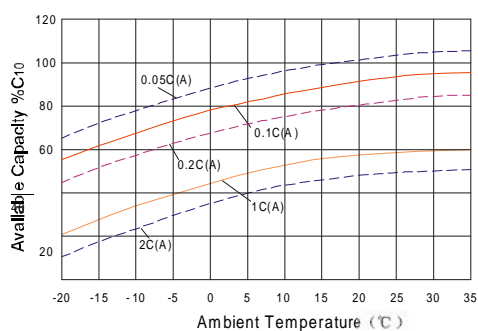
All mentioned values are average values.

6FM 2.9

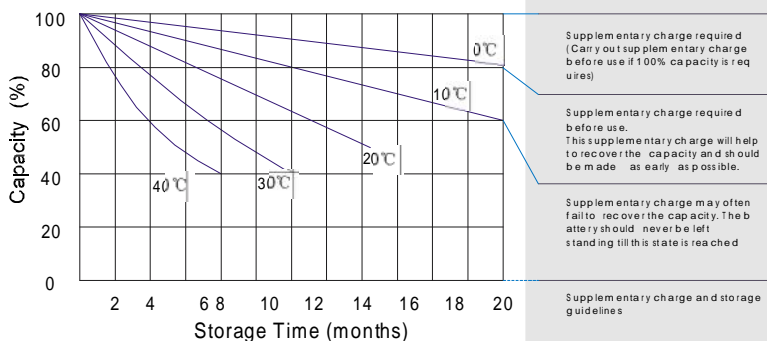
12V 2.9Ah



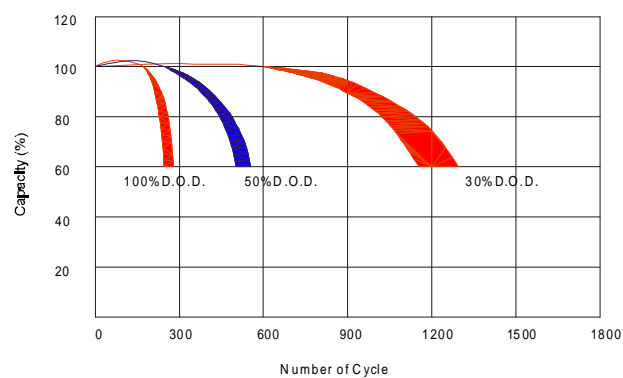
Temperature effects curve



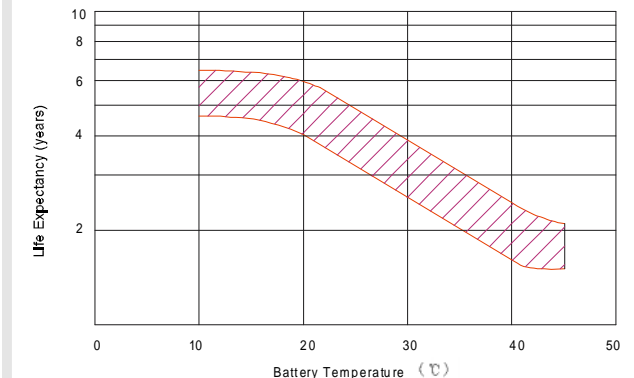
Storage characteristic



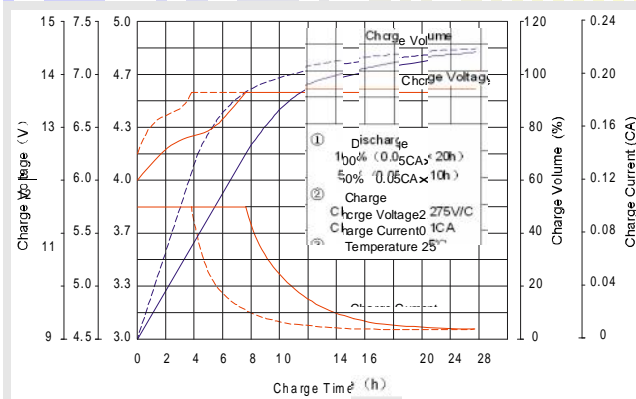
Life characteristics of cyclic use



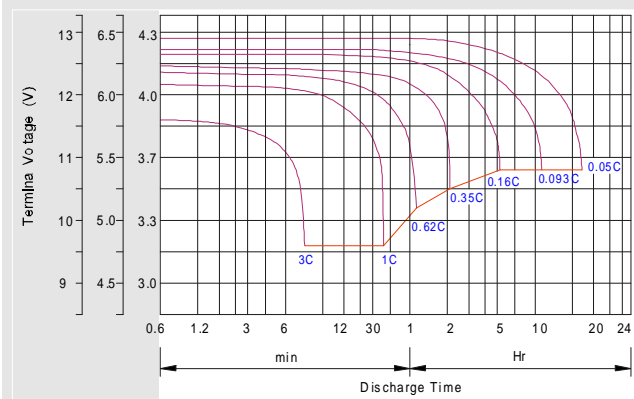
Effect of Temperature on long term float life



Charge characteristic curve for standby use



Discharge characteristic curve



Charging Procedures

| Application | Charge Voltage (V) | | | Max. Charge Current |
|-------------|--------------------|-----------|-----------------|---------------------|
| | Temperature | Set point | Allowable range | |
| Cycle Use | 25°C | 14.7 | 14.4~15.0 | 0.3C |
| Standby | 25°C | 13.7 | 13.6~13.8 | 0.3C |

Discharge Current VS. Discharge Voltage

| | | | |
|--------------------------------|------------|--------------|------------|
| Final Discharge Voltage V/cell | 1.75V | 1.70V | 1.60V |
| Discharge Current (A) | (A) ≤ 0.2C | 0.2C < (A) < | (A) ≥ 1.0C |

Charge the batteries at least once every six months, if they are stored at 25°C.

Charging Method:

| | |
|------------------|---------------------------------------|
| Constant Voltage | 14.4~15.0V, 5~11h, Max. Current 0.1CA |
| Constant Current | 0.1CA × 5h |
| Fast | 0.3CA × 1.7h |

Charging Procedures (6V series)

| Application | Charge Voltage (V) | | | Max. Charge Current |
|-------------|--------------------|-----------|-----------------|---------------------|
| | Temperature | Set point | Allowable range | |
| Cycle Use | 25°C | 7.35 | 7.25~7.45 | 0.3C |
| Standby | 25°C | 6.85 | 6.8~6.9 | 0.3C |

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