6FM55 12V 55Ah (20hr) Sealed Lead Acid (SLA) Battery



The rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and plates and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

Battery Construction

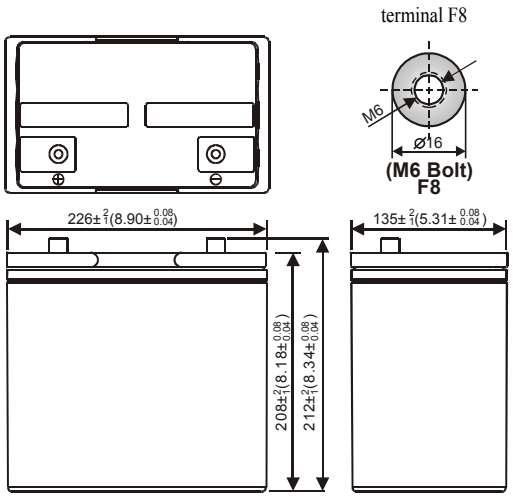
Component	Positive plate	Negative plate	Container&Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS UL94 HB	Rubber	Copper	Fiberglass	Sulfuric acid

General Features

- Absorbent Glass Mat (AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.
- Valve Regulated Lead Acid (VRLA) battery
- V0 Class Flame-Retardant ABS (UL94V-0) container and cover is optional
- Six months shelf life at 25ºC
- Design life 8-10 years depend on temperature, float charging*

Dimensions and Weight

Length(mm / inch)	226/ 8.90
Width(mm / inch)	135 / 5.31
Height(mm / inch)	208 / 8.18
Total Height(mm / inch)	212 / 8.34
Approx. Weight(Kg / lbs)	17.0 / 37.4



Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Design Life 77ºF (25ºC)	8-10 years
Nominal Capacity 77ºF (25ºC)	
20 hour rate (2.75A, 10.5V)	55Ah
10 hour rate (5.225A, 10.5V)	52.25Ah
5 hour rate (9.35A, 10.2V)	46.75Ah
1 hour rate (55A, 9.6V)	31.17Ah
Internal Resistance	
Fully Charged battery 77ºF(25ºC)	≤8 mOhms
Self-Discharge	
3% of capacity declined per month at 25ºC(average)	
Operating Temperature Range	
Discharge	-20~60ºC
Charge	-10~60ºC
Storage	-20~60ºC
Max. Discharge Current 77ºF(25ºC)	660A(5s)
Short Circuit Current	1400A
Charge Methods: Constant Voltage Charge 77ºF(25ºC)	
Cycle use	14.4-14.8V
Maximum charging current	16.5A
Temperature compensation	-30mV/ºC
Standby use	13.5-13.8V
Temperature compensation	-20mV/ºC

Discharge Constant Power (Watts at 77ºF25ºC)

End Voltage	1.85V	1.80V	1.75V	1.70V	1.65V	1.60V
10 min	210	244	265	276	281	285
15 min	163	187	202	209	213	215
30 min	86.9	99.5	107	111	113	115
60 min	64.7	67.5	69.3	70.8	72.0	72.6
180 min	26.3	28.2	29.2	29.8	30.3	30.6
300 min	18.3	19.3	20.0	20.3	20.7	20.9
600 min	10.6	11.1	11.4	11.6	11.7	11.7
1200 min	5.48	5.78	5.93	6.05	6.14	6.18

Discharge Constant Current (Amperes at 77ºF25ºC)

End Voltage	1.85V	1.80V	1.75V	1.70V	1.65V	1.60V
10 min	110	127	138	143	147	149
15 min	83.5	95.6	103	107	109	110
30 min	43.8	50.2	54.1	55.8	57.0	57.7
60 min	29.4	33.2	34.5	35.4	36.1	36.5
180 min	13.0	13.8	14.3	14.7	15.0	15.2
300 min	9.32	9.74	9.92	10.1	10.3	10.4
600 min	5.39	5.63	5.65	5.71	5.76	5.80
1200 min	2.76	2.89	2.96	3.00	3.03	3.05

(Note)The above characteristics data are average values.

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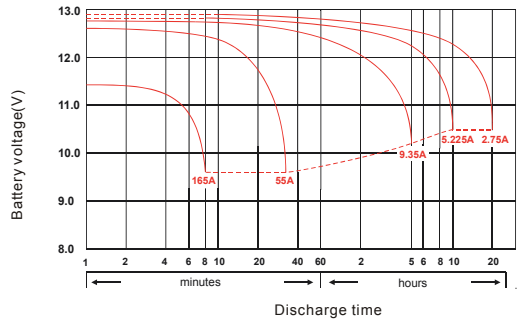
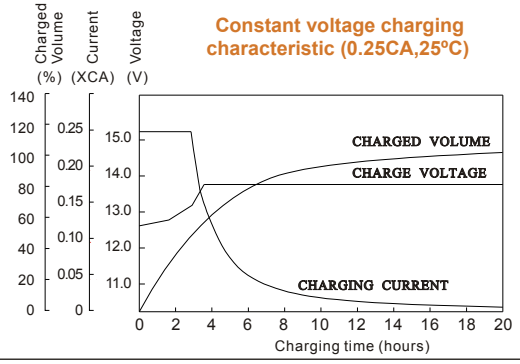
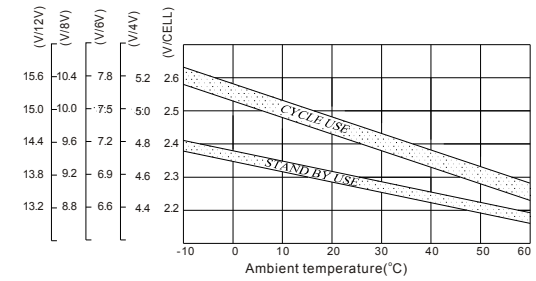
Discharge characteristic (25ºC)



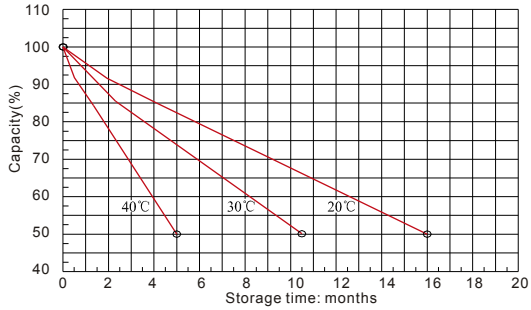
Constant voltage charging characteristic (0.25CA,25ºC)



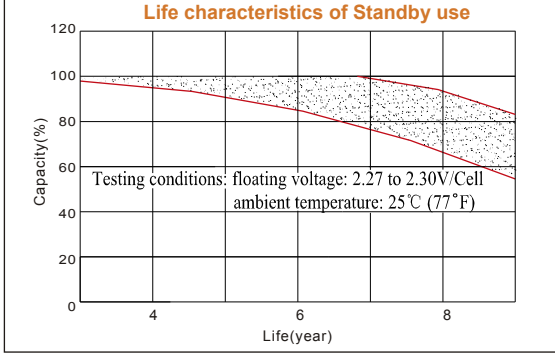
Relationship between charging voltage and temperature



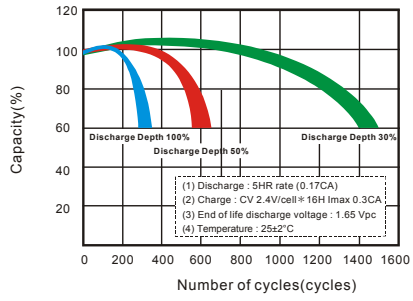
Self-discharge characteristic



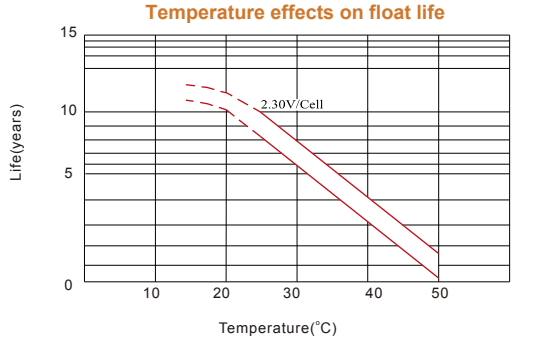
Life characteristics of Standby use



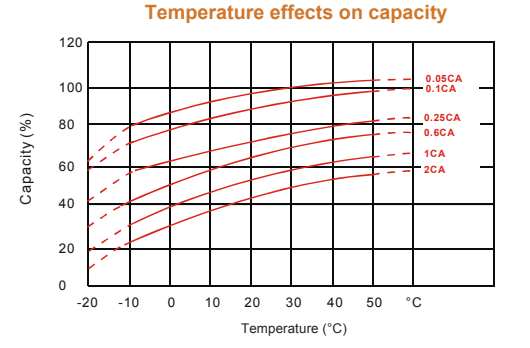
Cycle service life in relation to depth of discharge



Temperature effects on float life



Temperature effects on capacity



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