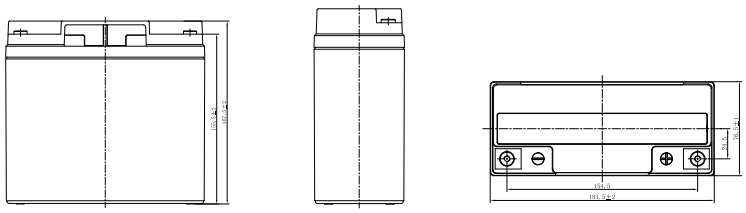
VALVE REGULATED LEAD ACID AGM BATTERY

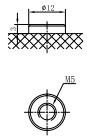
AT12180D

Specification

Cells Per Unit	6
Voltage Per Unit	12
Capacity	18Ah@20hr-rate to 1.75V per cell @25 ˚C
Weight	Approx. 6.00 Kg (Tolerance±3.0%)
Internal Resistance	Approx. 14 mΩ
Terminal	T12/T12-I
Max. Discharge Current	270A (5 sec)
Design Life	5 years (floating charge)
Max. Charging Current	5.4A
Reference Capacity	C3 13.9AH C5 15.6AH C10 16.8AH C20 18.0AH
Float Charging Voltage	13.5 V~13.8 V @ 25˚C Temperature Compensation: -3mV/˚C/Cell
Cycle Use Voltage	14.4 V~15.0 V @ 25˚C Temperature Compensation: -5mV/˚C/Cell
Operating Temperature Range	Discharge: -15˚C~50˚C Charge: -20℃~40℃ Storage: -15˚C~40˚C
Normal Operating Temperature Range	25˚C±5˚C
Self Discharge	AMP-Tech Plus (VRLA) batteries can be stored for up to 6 months at 25˚C then recharging is recommended. Monthly self-discharge ratio is less than 3% at 25˚C. Please charged batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

Dimensions





T12 Terminal

Length	181.5±2mm (7.15 inches)
Width	76.5±1mm (3.01 inches)
Height	167.5±2mm (6.59 inches)
Total Height	167.5±2mm (6.59 inches)

Terminal	Value
M5	6~7 N*m
M6	8~10 N*m
M8	10~12 N*m

Unit: mm

Constant Current Discharge Characteristics :A(25˚C)

F.V/Time	10MIN	15MIN	20MIN	30MIN	45MIN	1H	2H	3H	4H	5H	6H	8H	10H	20H
1.85V/cell	40.1	30.9	25.1	18.3	13.2	10.8	6.19	4.46	3.56	3.03	2.59	2.04	1.67	0.880
1.80V/cell	42.5	32.4	26.2	18.8	13.6	11.1	6.31	4.55	3.61	3.08	2.64	2.07	1.68	0.890
1.75V/cell	44.2	33.5	26.9	19.3	13.9	11.3	6.42	4.62	3.66	3.11	2.66	2.10	1.70	0.900
1.70V/cell	46.0	34.7	27.6	19.8	14.1	11.5	6.52	4.68	3.71	3.16	2.70	2.12	1.72	0.909
1.65V/cell	47.3	35.5	28.3	20.2	14.4	11.7	6.59	4.73	3.74	3.19	2.72	2.13	1.73	0.918
1.60V/cell	49.3	36.7	29.1	20.7	14.8	12.0	6.72	4.82	3.82	3.23	2.76	2.17	1.76	0.927

Constant Power Discharge Characteristics : WPC(25˚C)

F.V/Time	10MIN	15MIN	20MIN	30MIN	45MIN	1H	2H	3H	4H	5H	6H	8H	10H	20H
1.85V/cell	76.3	59.2	48.4	35.3	25.7	21.1	12.2	8.78	7.02	5.99	5.13	4.05	3.30	1.76
1.80V/cell	80.4	61.7	50.1	36.2	26.2	21.5	12.3	8.91	7.10	6.07	5.21	4.10	3.35	1.78
1.75V/cell	83.0	63.4	51.2	37.0	26.6	21.9	12.5	9.03	7.19	6.13	5.26	4.15	3.38	1.80
1.70V/cell	85.7	65.1	52.4	37.7	27.2	22.1	12.7	9.14	7.28	6.21	5.32	4.19	3.41	1.82
1.65V/cell	87.7	66.5	53.4	38.3	27.5	22.5	12.8	9.23	7.34	6.26	5.36	4.22	3.43	1.83
1.60V/cell	90.2	68.3	54.7	39.2	28.1	22.9	13.0	9.37	7.44	6.34	5.43	4.28	3.47	1.85

(Note) The above characteristics data are average values obtained within three charge/discharge cycle not the minimum values.
The battery must be fully charged before the capacity test. The C_{20} should reach 95% after the first cycle and 100% after the third cycle.

AMP-TECH

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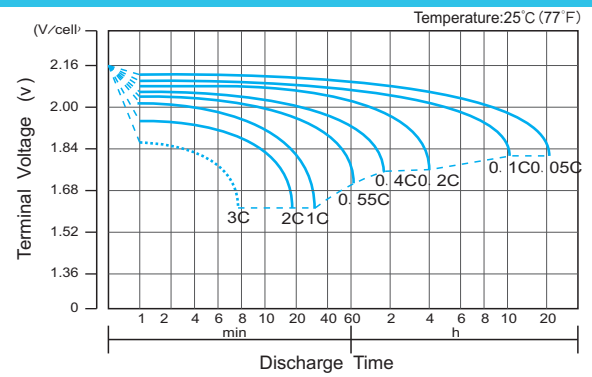
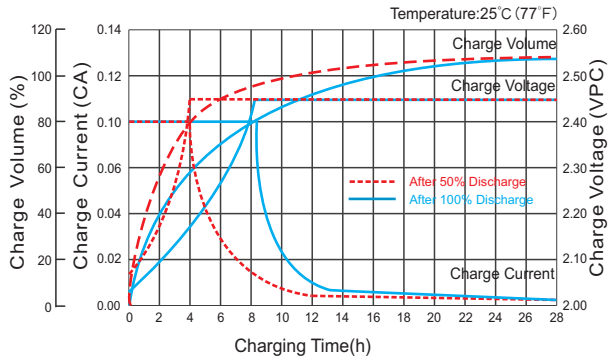
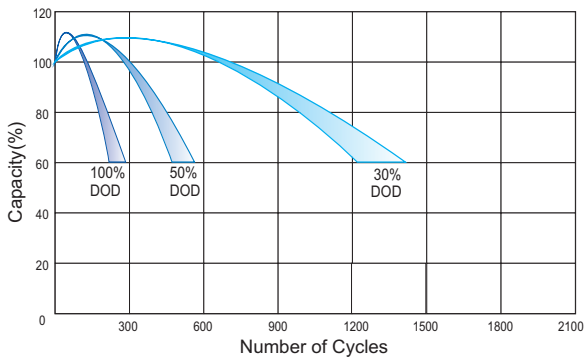
Discharge Characteristics Curve



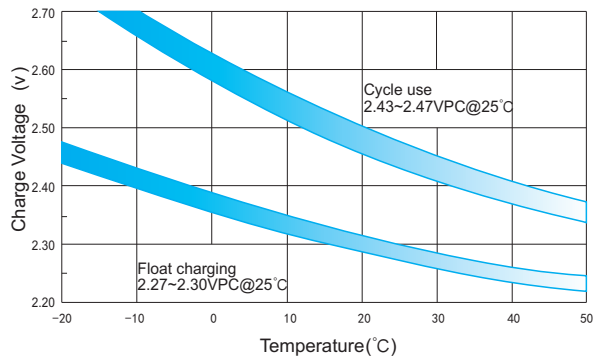
Charge Characteristic Curve for Cycle Use(IU)



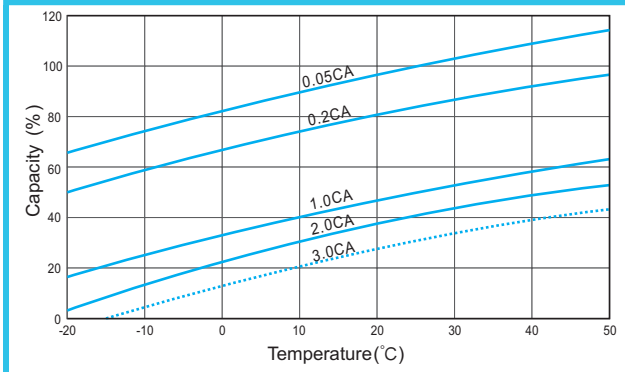
Cycle Life in Relation to Depth of Discharge



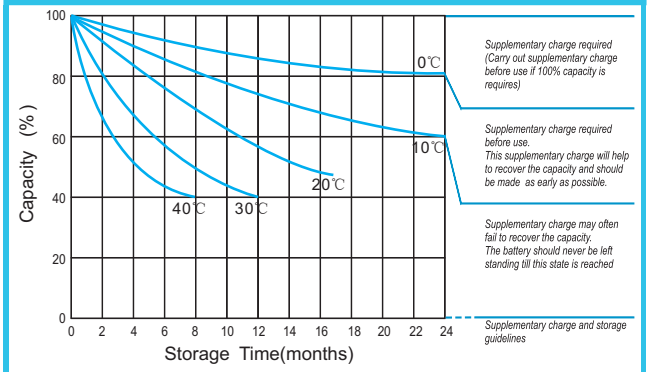
Relationship Between Charging Voltage and Temperature



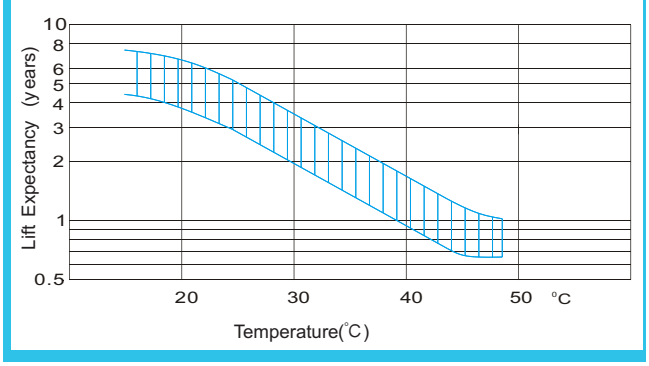
Temperature Effects on Capacity



Storage Characteristics



Effect of Temperature on Long Term Life



Relationship of OCV And State of Charge(20℃)