RA6-200(6V200Ah)

Specification

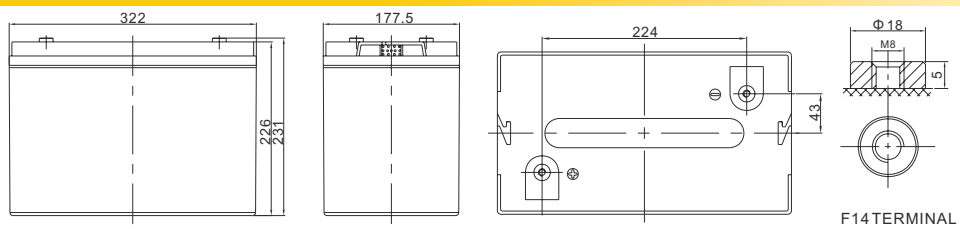
Cells Per Unit	3
Voltage Per Unit	6V
Nominal Capacity	200Ah@10hour-rate to 1.80V per cell @25℃
Weight	Approx. 27.5 Kg (Tolerance±5.0%)
Internal Resistance	≤2.0 mΩ (Full Charge Condition @25℃)
Terminal	Default F14(M8), F16(M8) Optional
Max. Discharge Current	2000A (5 sec)
Short Circuit Current	3700A
Design Life	12 years
Max. Charging Current	60.0 A
Reference Capacity	C_3 150.0Ah C_5 170.0Ah C_{10} 200.0Ah C_{20} 212.0Ah
Float Charging Voltage	6.75 V~6.90 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	7.30 V~7.40 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	MJB Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25C. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD2103160008513EC

Dimensions



F14 TERMINAL

Length	322±2mm (12.7 inches)
Width	177.5±2mm (6.99 inches)
Height	226±2mm (8.90 inches)
Total Height	231±2mm (9.09 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℃)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	439.3	352.3	216.8	122.2	72.8	56.4	44.3	37.7	25.4	21.1	11.0
1.65V	415.1	336.8	208.2	118.0	70.5	54.7	43.1	36.8	25.1	20.8	10.9
1.70V	382.2	315.4	199.0	114.2	68.2	53.2	42.0	35.8	24.7	20.5	10.7
1.75V	349.8	293.5	190.2	110.0	65.8	51.6	40.9	34.9	24.3	20.3	10.6
1.80V	316.7	271.0	181.8	105.8	63.4	50.0	39.7	34.0	23.9	20.0	10.5
1.85V	258.8	224.9	156.5	94.9	58.1	46.2	36.9	31.7	22.5	18.8	10.0

Constant Power Discharge Characteristics : W/Cell (25℃)

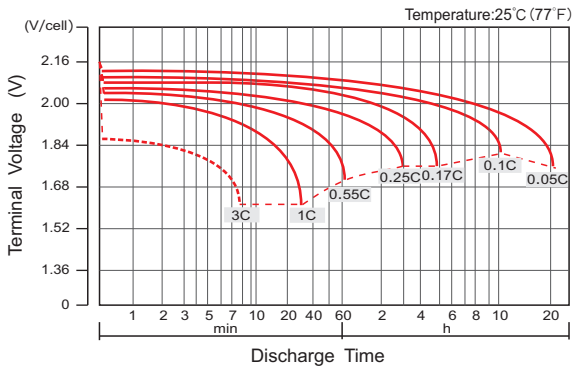
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	746.8	615.8	393.8	229.6	138.0	107.7	85.1	72.7	49.5	41.5	21.7
1.65V	719.3	597.5	382.1	223.0	134.2	104.9	83.1	71.1	49.1	41.0	21.4
1.70V	674.3	568.0	368.8	217.1	130.5	102.5	81.2	69.5	48.4	40.5	21.2
1.75V	628.4	536.2	356.2	210.5	126.5	99.8	79.4	68.0	47.8	40.0	21.0
1.80V	578.7	502.1	343.9	203.6	122.6	97.1	77.4	66.5	47.1	39.5	20.8
1.85V	481.4	422.6	299.1	183.7	113.0	90.2	72.2	62.2	44.4	37.3	19.7

(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_{10} should reach 95% after the first cycle and 100% after the third cycle.

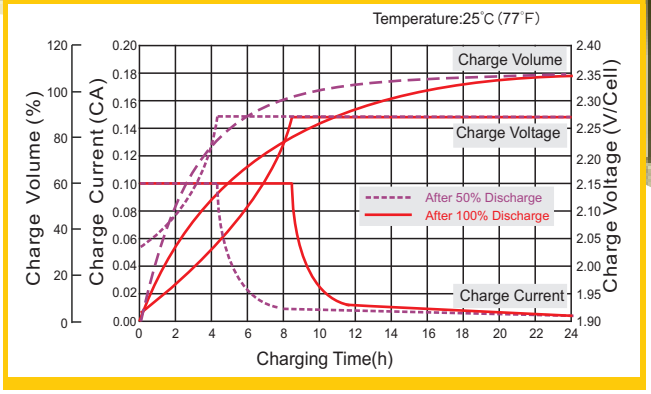
RA6-200(6V200Ah)

MJB

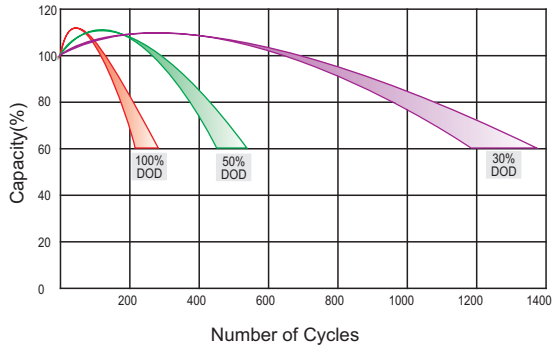
Discharge Characteristics Curve



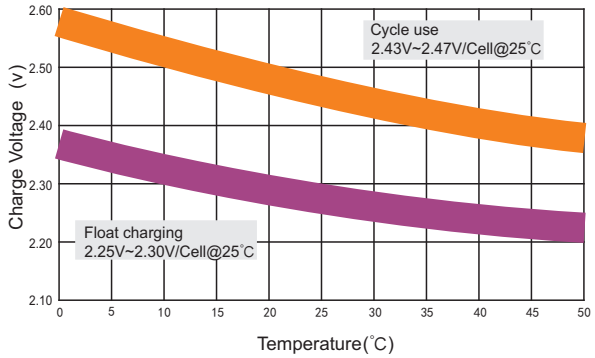
Charge Characteristic Curve For Standby Use(IU)



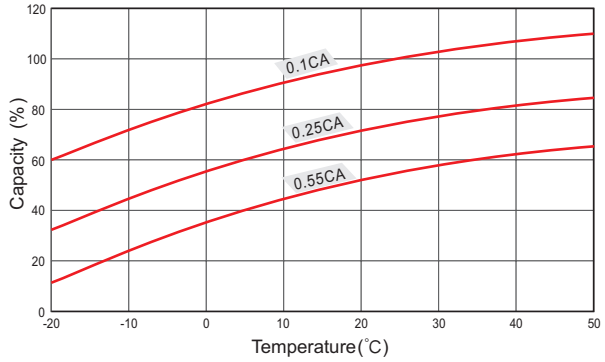
Cycle Life In Relation To Depth Of Discharge



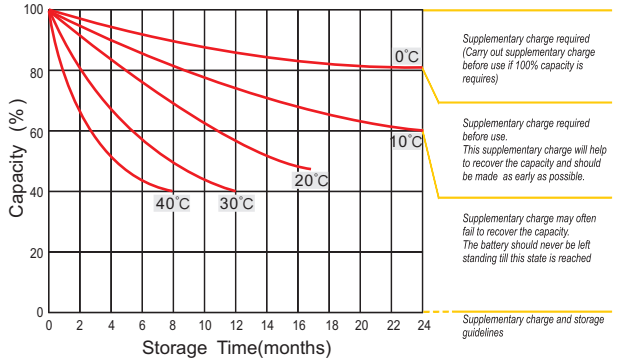
Relationship Between Charging Voltage And Temperature



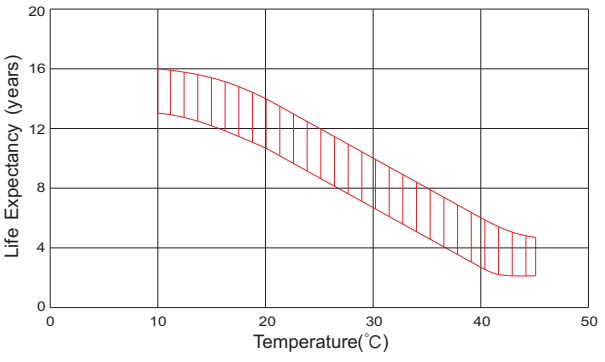
Temperature Effects On Capacity



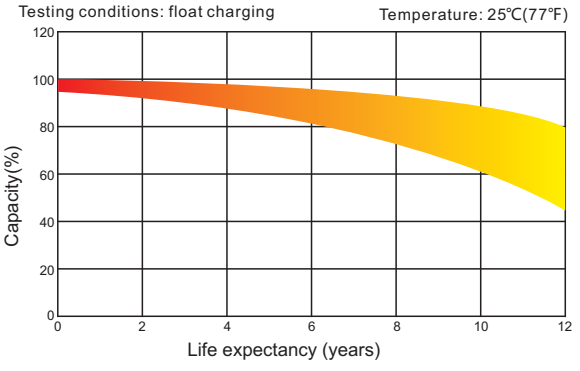
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, MJB reserves the right to explain and update the latest information.

MJBATTERY

Rua Da carreira 115-117 Funchal, Madeira Portugal
E-mail: info@mjbattery.com Version 23A-0

RA6-150(6V150Ah)

Specification

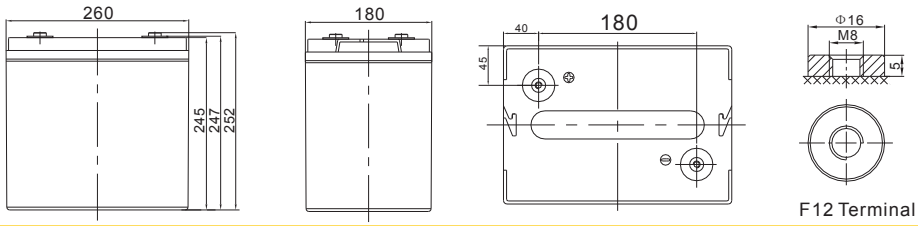
Cells Per Unit	3
Voltage Per Unit	6V
Nominal Capacity	150Ah@10hour-rate to 1.80V per cell @25℃
Weight	Approx. 22.0 Kg (Tolerance±5.0%)
Internal Resistance	≤2.5 mΩ (Full Charge Condition @25℃)
Terminal	Default F12(M8)
Max. Discharge Current	1500A (5 sec)
Short Circuit Current	2770A
Design Life	12 years
Max. Charging Current	45.0 A
Reference Capacity	C_3 112.5Ah C_5 127.5Ah C_{10} 150.0Ah C_{20} 159.0Ah
Float Charging Voltage	6.75 V~6.90 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	7.30 V~7.40 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	MJB Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25C. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD2103160008513EC

Dimensions



F12 Terminal

Length	260±2mm (10.2 inches)
Width	180±2mm (7.09 inches)
Height	245±2mm (9.65 inches)
Total Height	252±2mm (9.92 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℃)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	329.5	264.2	162.6	91.6	54.6	42.3	33.3	28.3	19.0	15.8	8.28
1.65V	311.4	252.6	156.1	88.5	52.9	41.0	32.4	27.6	18.8	15.6	8.15
1.70V	286.6	236.6	149.2	85.6	51.1	39.9	31.5	26.8	18.5	15.4	8.05
1.75V	262.4	220.2	142.6	82.5	49.3	38.7	30.7	26.2	18.3	15.2	7.95
1.80V	237.5	203.3	136.3	79.3	47.6	37.5	29.8	25.5	17.9	15.0	7.87
1.85V	194.1	168.7	117.4	71.2	43.6	34.7	27.7	23.8	16.8	14.1	7.47

Constant Power Discharge Characteristics : W/Cell (25℃)

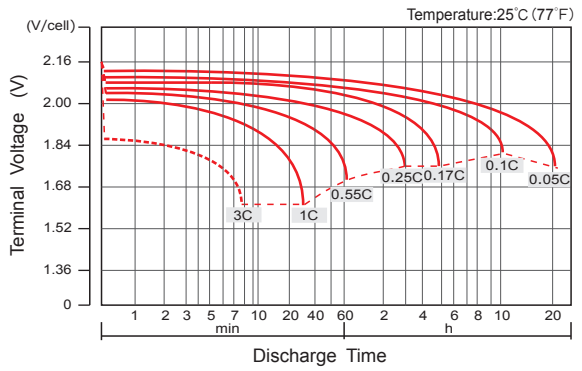
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	560.1	461.9	295.4	172.2	103.5	80.8	63.8	54.5	37.1	31.1	16.3
1.65V	539.4	448.1	286.5	167.3	100.7	78.6	62.3	53.3	36.8	30.8	16.1
1.70V	505.7	426.0	276.6	162.8	97.9	76.8	60.9	52.1	36.3	30.3	15.9
1.75V	471.3	402.2	267.1	157.8	94.9	74.9	59.5	51.0	35.9	30.0	15.7
1.80V	434.0	376.6	257.9	152.7	92.0	72.8	58.0	49.9	35.4	29.6	15.6
1.85V	361.0	317.0	224.3	137.8	84.7	67.6	54.2	46.6	33.3	27.9	14.8

(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_{10} should reach 95% after the first cycle and 100% after the third cycle.

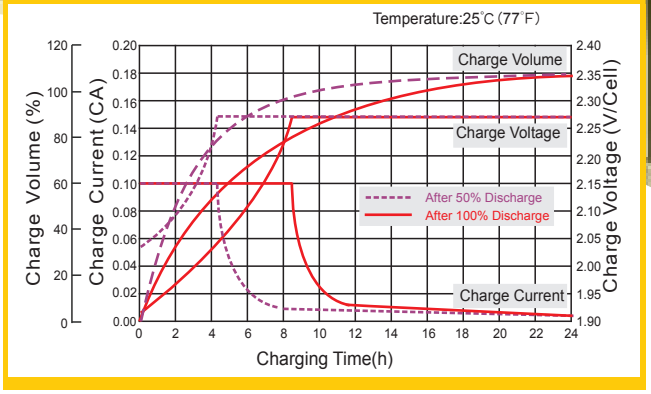
RA6-150(6V150Ah)

MJB

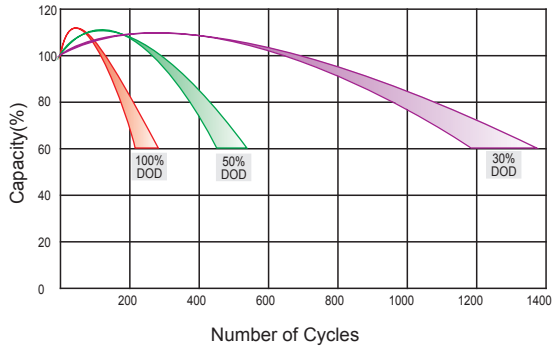
Discharge Characteristics Curve



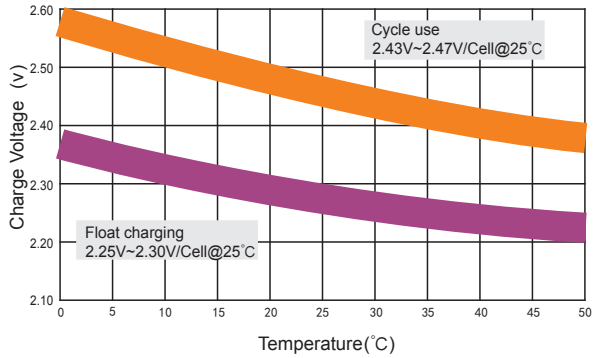
Charge Characteristic Curve For Standby Use(IU)



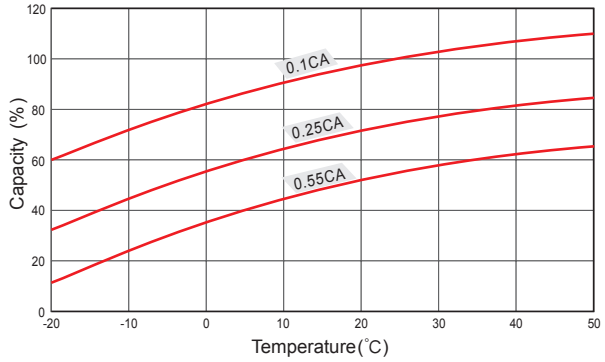
Cycle Life In Relation To Depth Of Discharge



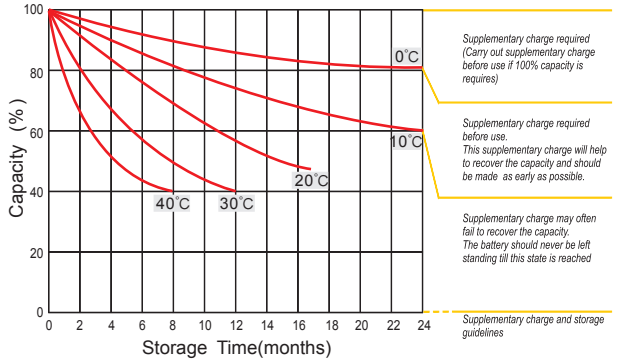
Relationship Between Charging Voltage And Temperature



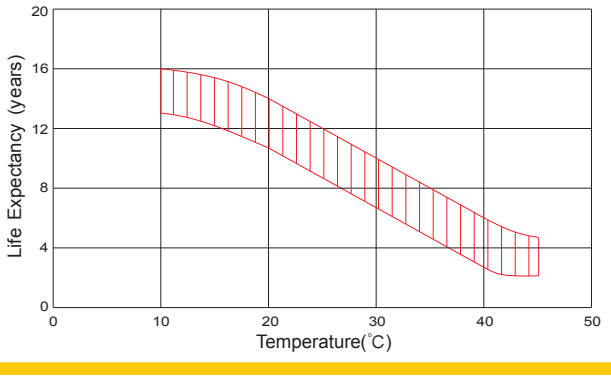
Temperature Effects On Capacity



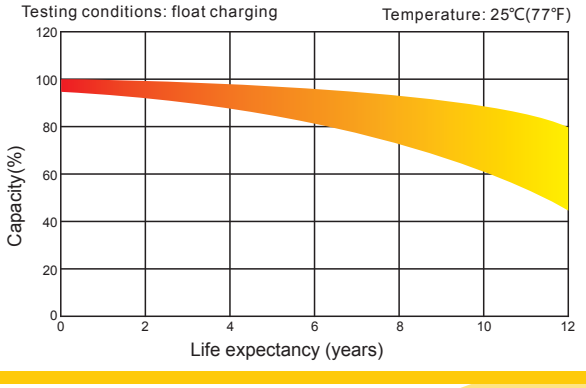
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, MJB reserves the right to explain and update the latest information.

MJBATTERY

Rua Da carreira 115-117 Funchal, Madeira Portugal
E-mail: info@mjbattery.com Version 23A-0

RA6-100(6V100Ah)

Specification

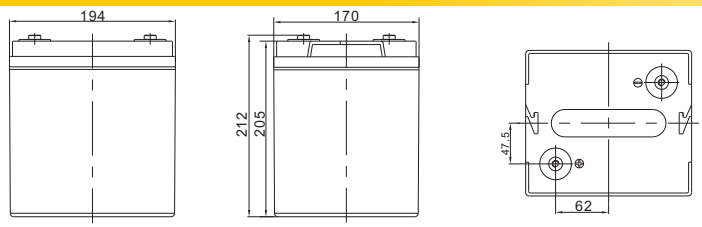
Cells Per Unit	3
Voltage Per Unit	6V
Nominal Capacity	100Ah@10hour-rate to 1.80V per cell @25℃
Weight	Approx. 16.0 Kg (Tolerance±5.0%)
Internal Resistance	≤3.0 mΩ (Full Charge Condition @25℃)
Terminal	Default F14(M8)
Max. Discharge Current	1000A (5 sec)
Short Circuit Current	1850A
Design Life	12 years
Max. Charging Current	30.0 A
Reference Capacity	C_3 75.0Ah C_5 85.0Ah C_{10} 100.0Ah C_{20} 106.0Ah
Float Charging Voltage	6.75 V~6.90 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	7.30 V~7.40 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	MJB Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25℃. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

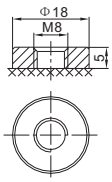
RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD2103160008513EC

Dimensions





F14 Terminal

Length	194±2mm (7.64 inches)
Width	170±2mm (6.69 inches)
Height	205±2mm (8.07 inches)
Total Height	212±2mm (8.35 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℃)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	231.9	185.4	109.5	61.1	36.4	28.2	22.2	18.9	12.7	10.5	5.52
1.65V	219.1	177.3	105.1	59.0	35.2	27.3	21.6	18.4	12.5	10.4	5.43
1.70V	201.7	166.0	100.5	57.1	34.1	26.6	21.0	17.9	12.3	10.3	5.36
1.75V	184.6	154.5	96.0	55.0	32.9	25.8	20.4	17.4	12.2	10.1	5.30
1.80V	167.1	142.7	91.8	52.9	31.7	25.0	19.9	17.0	12.0	10.0	5.25
1.85V	136.6	118.4	79.1	47.4	29.1	23.1	18.5	15.9	11.2	9.41	4.98

Constant Power Discharge Characteristics : W/Cell (25℃)

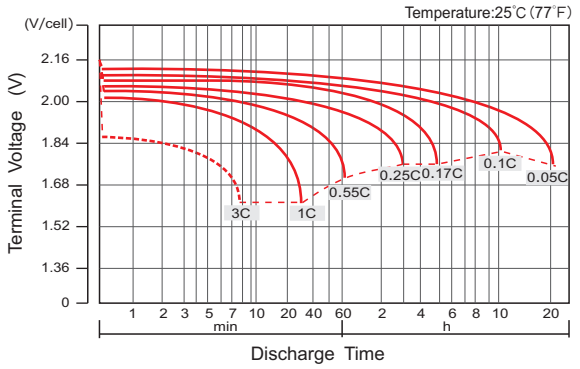
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	394.1	324.1	198.9	114.8	69.0	53.9	42.6	36.4	24.8	20.7	10.9
1.65V	379.6	314.5	193.0	111.5	67.1	52.4	41.6	35.6	24.5	20.5	10.7
1.70V	355.9	298.9	186.3	108.6	65.3	51.2	40.6	34.8	24.2	20.2	10.6
1.75V	331.6	282.2	179.9	105.2	63.3	49.9	39.7	34.0	23.9	20.0	10.5
1.80V	305.4	264.3	173.7	101.8	61.3	48.6	38.7	33.2	23.6	19.8	10.4
1.85V	254.1	222.4	151.1	91.9	56.5	45.1	36.1	31.1	22.2	18.6	9.87

(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_{10} should reach 95% after the first cycle and 100% after the third cycle.

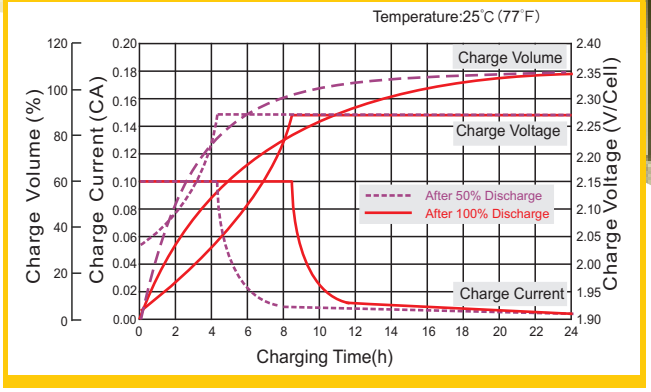
RA6-100(6V100Ah)

MJB

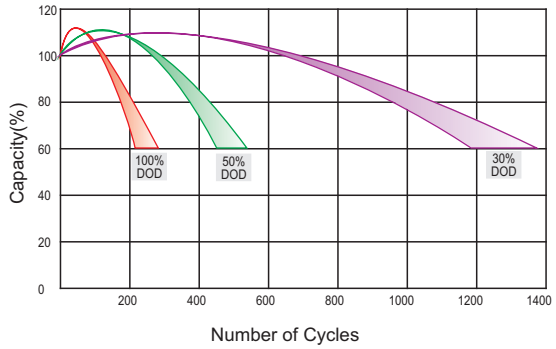
Discharge Characteristics Curve



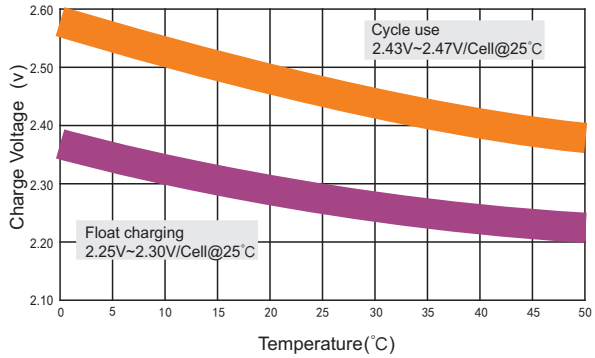
Charge Characteristic Curve For Standby Use(IU)



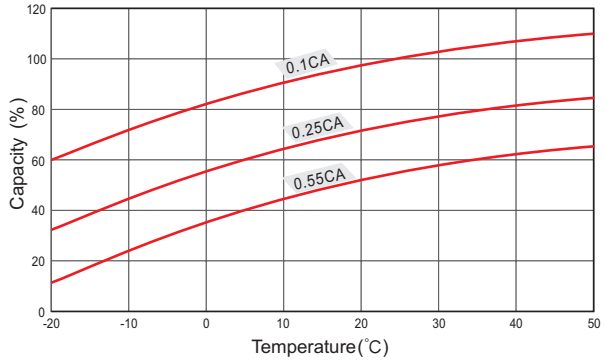
Cycle Life In Relation To Depth Of Discharge



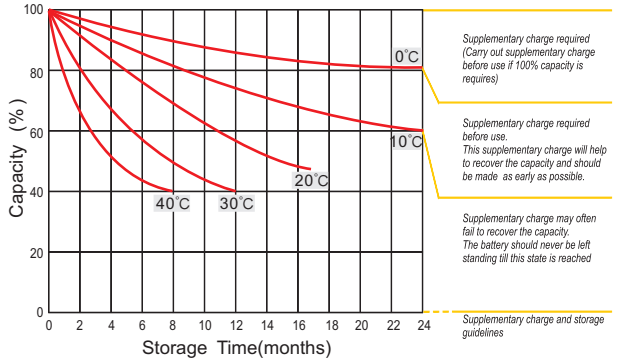
Relationship Between Charging Voltage And Temperature



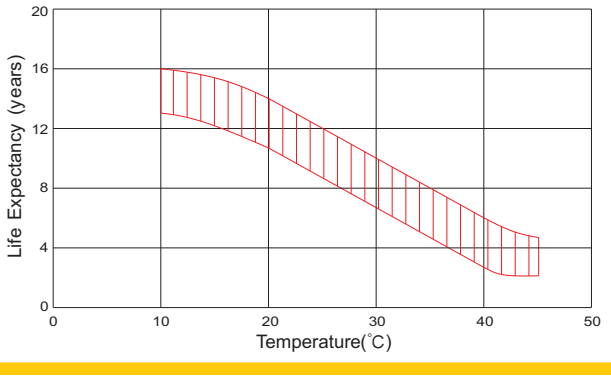
Temperature Effects On Capacity



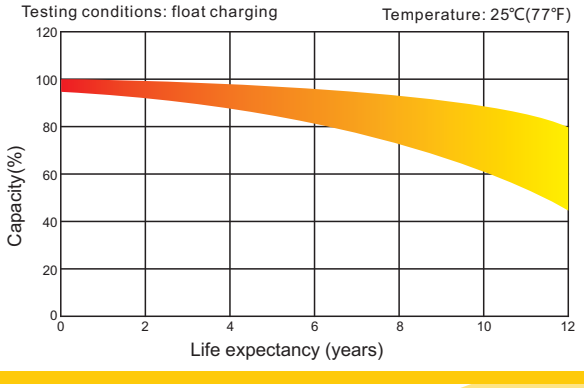
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, MJB reserves the right to explain and update the latest information.

MJBATTERY

Rua Da carreira 115-117 Funchal, Madeira Portugal
E-mail: info@mjbattery.com Version 23A-0

RA12-80(12V80Ah)

MJB

Specification

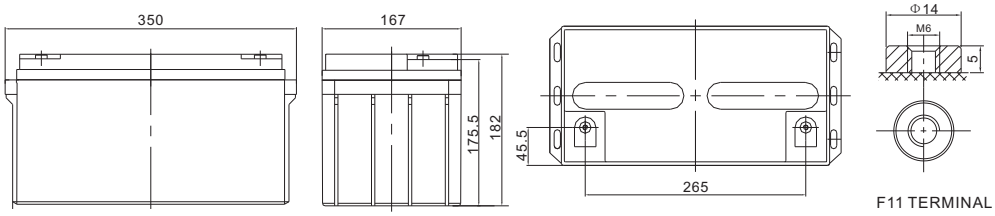
Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	80Ah@10hour-rate to 1.80V per cell @25℃
Weight	Approx. 21.5 Kg (Tolerance±5.0%)
Internal Resistance	≤6.0 mΩ (Full Charge Condition @25℃)
Terminal	Default F11(M6), F5(M8) Optional
Max. Discharge Current	800A (5 sec)
Short Circuit Current	1840A
Design Life	12 years
Max. Charging Current	24.0 A
Reference Capacity	C_3 60.0Ah C_5 68.0Ah C_{10} 80.0Ah C_{20} 84.8Ah
Float Charging Voltage	13.5 V~13.8 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	MJB Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD2103160008513EC

Dimensions



Length	350±2mm (13.8 inches)
Width	167±2mm (6.57 inches)
Height	182±2mm (7.17 inches)
Total Height	182±2mm (7.17 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℃)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	195.3	148.3	87.6	48.9	29.1	22.6	17.7	15.1	10.1	8.44	4.41
1.65V	184.5	141.8	84.1	47.2	28.2	21.9	17.3	14.7	10.0	8.34	4.34
1.70V	169.9	132.8	80.4	45.7	27.3	21.3	16.8	14.3	9.87	8.21	4.29
1.75V	155.5	123.6	76.8	44.0	26.3	20.6	16.4	14.0	9.74	8.10	4.24
1.80V	140.7	114.1	73.4	42.3	25.4	20.0	15.9	13.6	9.57	8.00	4.20
1.85V	115.0	94.7	63.3	38.0	23.2	18.5	14.8	12.7	8.99	7.53	3.99

Constant Power Discharge Characteristics : W/Cell (25℃)

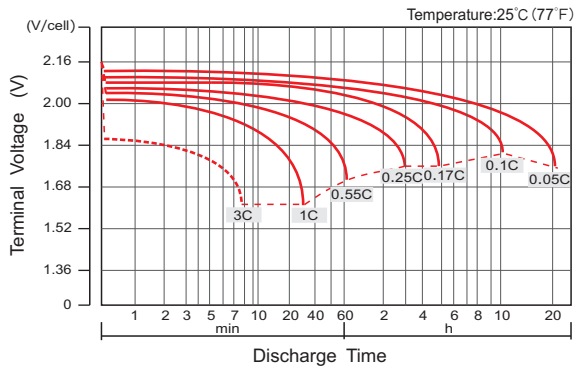
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	331.9	259.3	159.1	91.9	55.2	43.1	34.0	29.1	19.8	16.6	8.69
1.65V	319.7	251.6	154.4	89.2	53.7	41.9	33.2	28.4	19.6	16.4	8.57
1.70V	299.7	239.2	149.0	86.9	52.2	41.0	32.5	27.8	19.4	16.2	8.47
1.75V	279.3	225.8	143.9	84.2	50.6	39.9	31.8	27.2	19.1	16.0	8.38
1.80V	257.2	211.4	138.9	81.4	49.1	38.8	31.0	26.6	18.9	15.8	8.31
1.85V	213.9	177.9	120.8	73.5	45.2	36.1	28.9	24.9	17.7	14.9	7.90

(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_{10} should reach 95% after the first cycle and 100% after the third cycle.

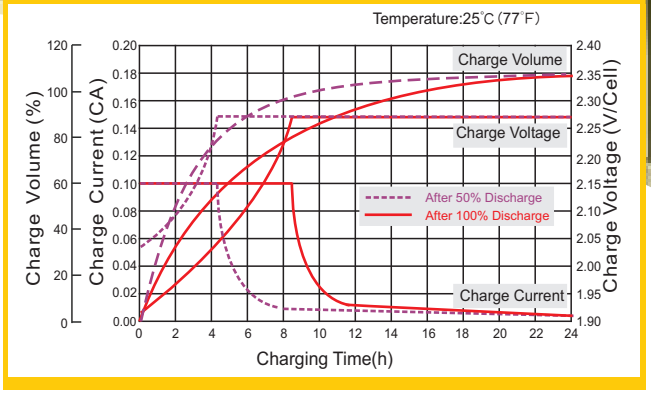
RA12-80(12V80Ah)

MJB

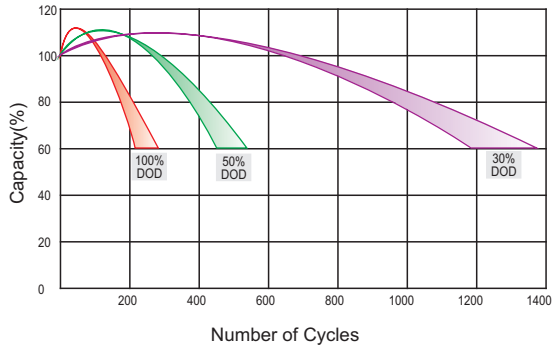
Discharge Characteristics Curve



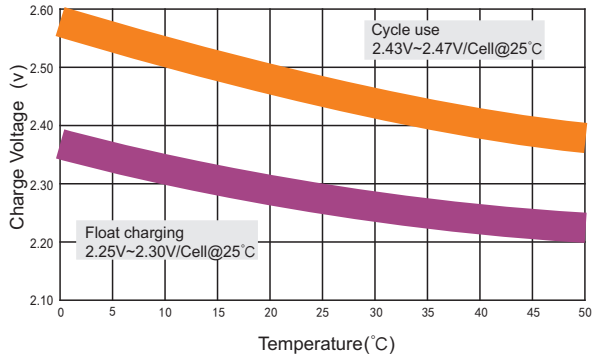
Charge Characteristic Curve For Standby Use(IU)



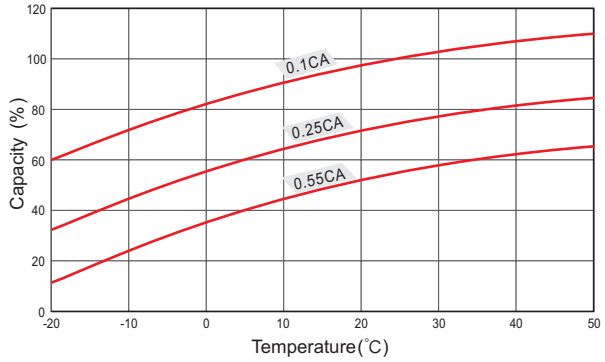
Cycle Life In Relation To Depth Of Discharge



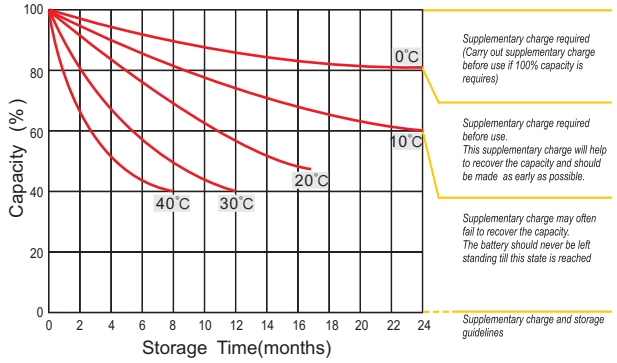
Relationship Between Charging Voltage And Temperature



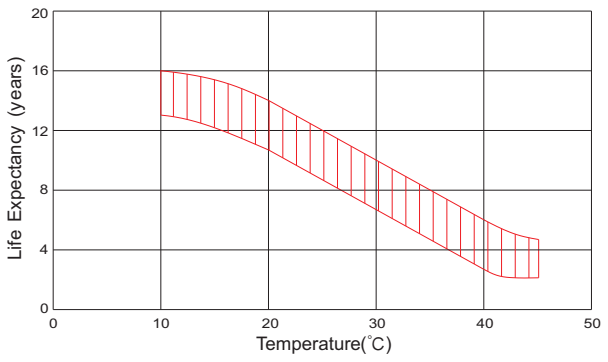
Temperature Effects On Capacity



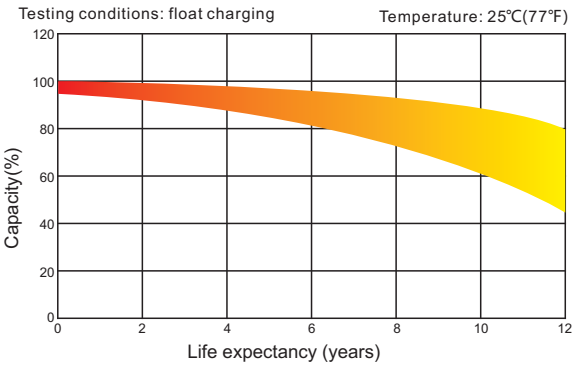
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



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MJBATTERY

Rua Da carreira 115-117 Funchal, Madeira Portugal
E-mail: info@mjbattery.com Version 23A-0

RA12-70(12V70Ah)

Specification

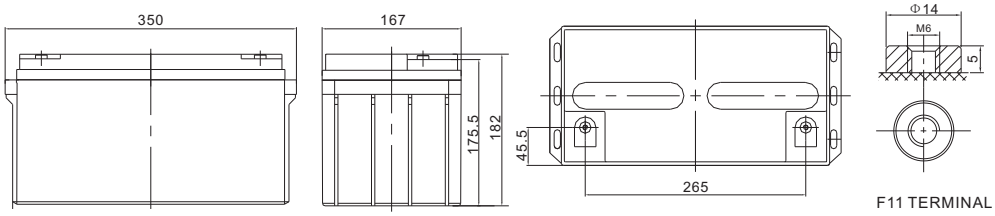
Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	70Ah@10hour-rate to 1.80V per cell @25℃
Weight	Approx. 19.5 Kg (Tolerance±5.0%)
Internal Resistance	≤7.0 mΩ (Full Charge Condition @25℃)
Terminal	Default F11(M6), F5(M8) Optional
Max. Discharge Current	700A (5 sec)
Short Circuit Current	1520A
Design Life	12 years
Max. Charging Current	21.0 A
Reference Capacity	C_3 52.5Ah C_5 59.5Ah C_{10} 70.0Ah C_{20} 74.2Ah
Float Charging Voltage	13.5 V~13.8 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	MJB Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD210316008513EC

Dimensions



Length	350±2mm (13.8 inches)
Width	167±2mm (6.57 inches)
Height	182±2mm (7.17 inches)
Total Height	182±2mm (7.17 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℃)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	170.8	129.8	76.7	42.8	25.5	19.7	15.5	13.2	8.88	7.38	3.86
1.65V	161.4	124.1	73.6	41.3	24.7	19.1	15.1	12.9	8.78	7.29	3.80
1.70V	148.6	116.2	70.3	40.0	23.9	18.6	14.7	12.5	8.64	7.18	3.76
1.75V	136.0	108.1	67.2	38.5	23.0	18.1	14.3	12.2	8.52	7.09	3.71
1.80V	123.2	99.9	64.3	37.0	22.2	17.5	13.9	11.9	8.38	7.00	3.67
1.85V	100.6	82.9	55.3	33.2	20.3	16.2	12.9	11.1	7.86	6.59	3.49

Constant Power Discharge Characteristics : W/Cell (25℃)

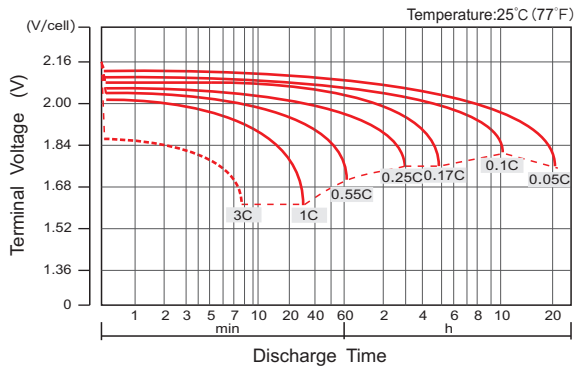
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	290.4	226.9	139.2	80.4	48.3	37.7	29.8	25.5	17.3	14.5	7.61
1.65V	279.7	220.1	135.1	78.1	47.0	36.7	29.1	24.9	17.2	14.4	7.50
1.70V	262.2	209.3	130.4	76.0	45.7	35.9	28.4	24.3	16.9	14.2	7.41
1.75V	244.4	197.6	125.9	73.7	44.3	34.9	27.8	23.8	16.7	14.0	7.33
1.80V	225.1	185.0	121.6	71.3	42.9	34.0	27.1	23.3	16.5	13.8	7.27
1.85V	187.2	155.7	105.7	64.3	39.5	31.6	25.3	21.8	15.5	13.0	6.91

(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_{10} should reach 95% after the first cycle and 100% after the third cycle.

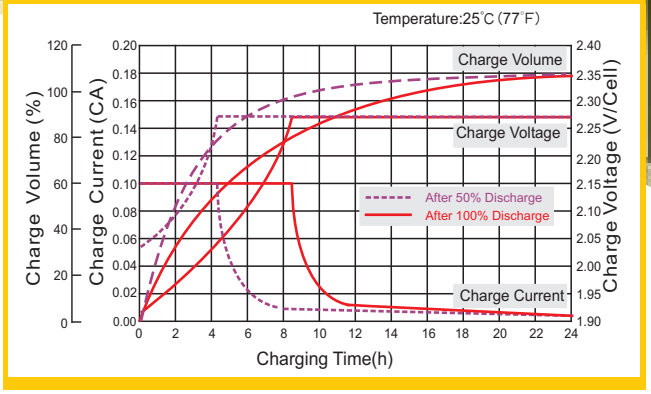
RA12-70(12V70Ah)

MJB

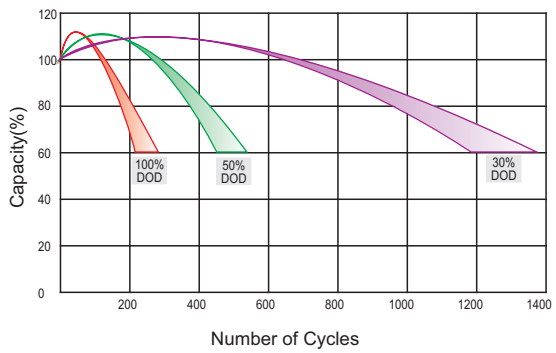
Discharge Characteristics Curve



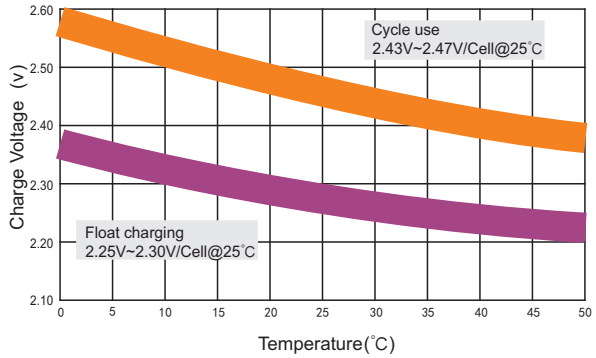
Charge Characteristic Curve For Standby Use(IU)



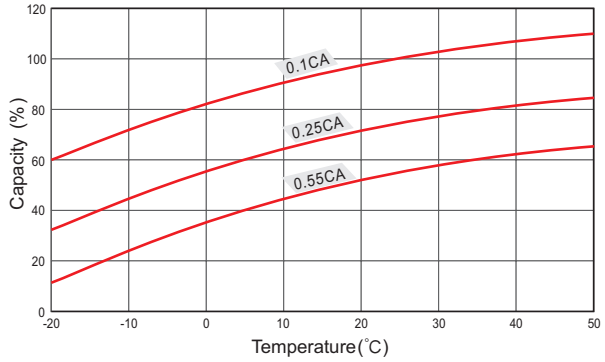
Cycle Life In Relation To Depth Of Discharge



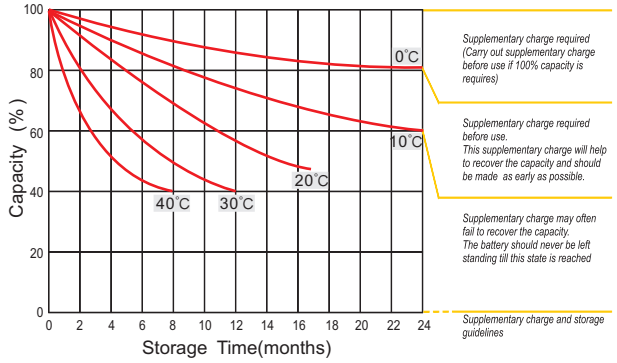
Relationship Between Charging Voltage And Temperature



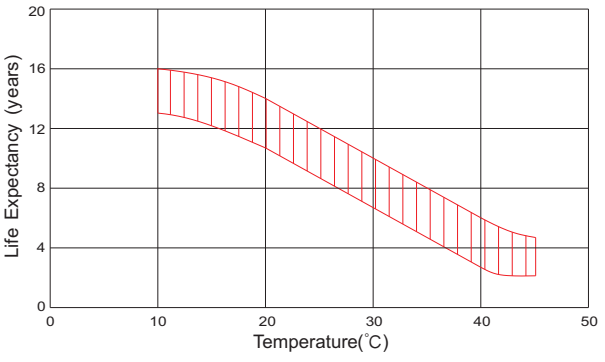
Temperature Effects On Capacity



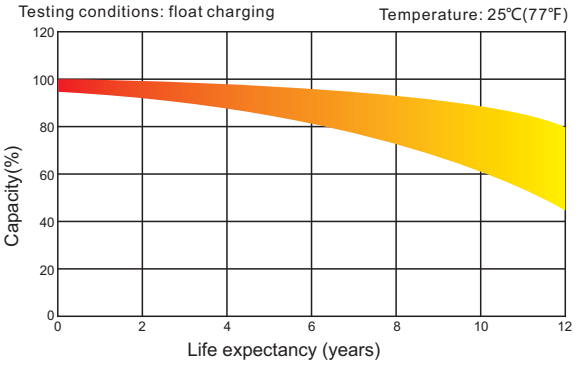
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



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MJBATTERY

Rua Da carreira 115-117 Funchal, Madeira Portugal
E-mail: info@mjbattery.com Version 23A-0

RA12-65(12V65Ah)

Specification

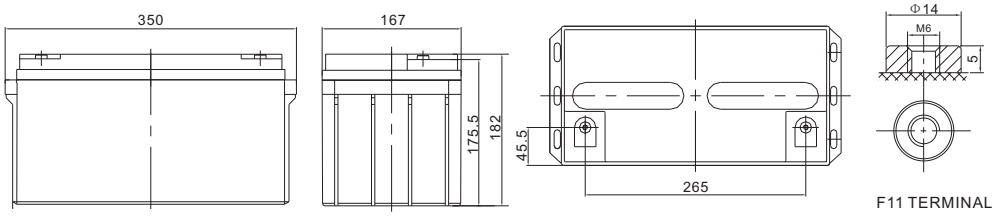
Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	65Ah@10hour-rate to 1.80V per cell @25℃
Weight	Approx. 17.5 Kg (Tolerance±5.0%)
Internal Resistance	≤8.5 mΩ (Full Charge Condition @25℃)
Terminal	Default F11(M6), F5(M8) Optional
Max. Discharge Current	650A (5 sec)
Short Circuit Current	1500A
Design Life	12 years
Max. Charging Current	19.5 A
Reference Capacity	C_3 48.9Ah C_5 55.0Ah C_{10} 65.0Ah C_{20} 68.8Ah
Float Charging Voltage	13.5 V~13.8 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	MJB Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD210316008513EC

Dimensions



Length	350±2mm (13.8 inches)
Width	167±2mm (6.57 inches)
Height	182±2mm (7.17 inches)
Total Height	182±2mm (7.17 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℃)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	202.0	155.5	119.3	70.5	39.7	23.7	18.3	14.4	12.3	8.24	6.86	3.59
1.65V	194.7	146.9	114.1	67.7	38.4	22.9	17.8	14.0	11.9	8.15	6.77	3.53
1.70V	185.2	135.2	106.8	64.7	37.1	22.2	17.3	13.6	11.6	8.02	6.67	3.49
1.75V	173.0	123.8	99.4	61.8	35.7	21.4	16.8	13.3	11.3	7.91	6.58	3.44
1.80V	157.6	112.1	91.8	59.1	34.4	20.6	16.3	12.9	11.0	7.78	6.50	3.41
1.85V	138.7	91.6	76.2	50.9	30.8	18.9	15.0	12.0	10.3	7.30	6.12	3.24

Constant Power Discharge Characteristics : W/Cell (25℃)

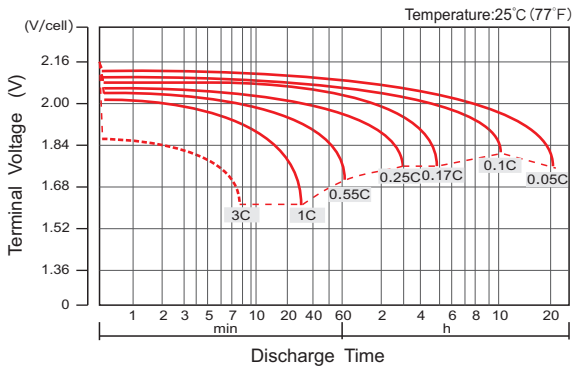
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	347.7	264.3	208.6	128.0	74.6	44.8	35.0	27.7	23.6	16.1	13.5	7.06
1.65V	344.0	254.5	202.4	124.2	72.5	43.6	34.1	27.0	23.1	15.9	13.3	6.96
1.70V	330.9	238.6	192.4	119.9	70.6	42.4	33.3	26.4	22.6	15.7	13.2	6.89
1.75V	314.7	222.4	181.6	115.8	68.4	41.1	32.4	25.8	22.1	15.5	13.0	6.81
1.80V	291.7	204.8	170.1	111.8	66.2	39.9	31.6	25.2	21.6	15.3	12.8	6.75
1.85V	261.2	170.4	143.1	97.2	59.7	36.7	29.3	23.5	20.2	14.4	12.1	6.42

(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_{10} should reach 95% after the first cycle and 100% after the third cycle.

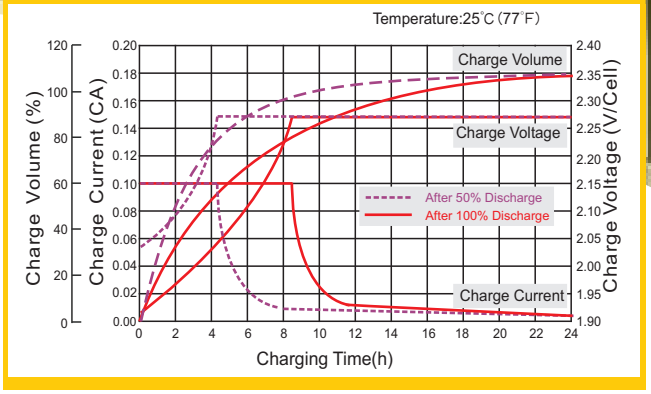
RA12-65(12V65Ah)

MJB

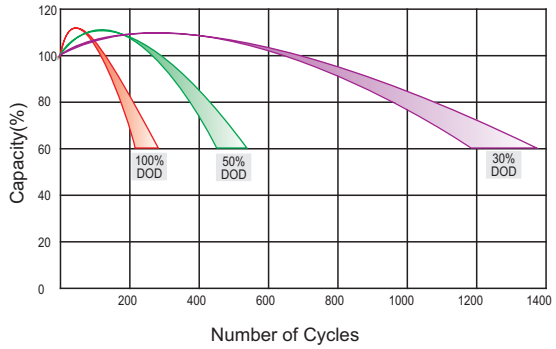
Discharge Characteristics Curve



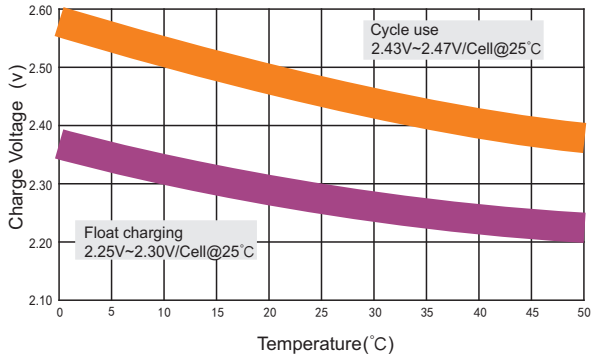
Charge Characteristic Curve For Standby Use(IU)



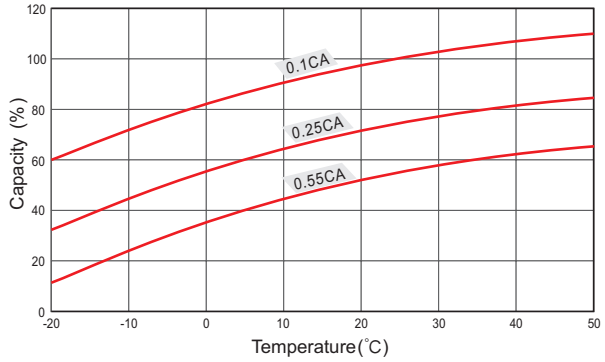
Cycle Life In Relation To Depth Of Discharge



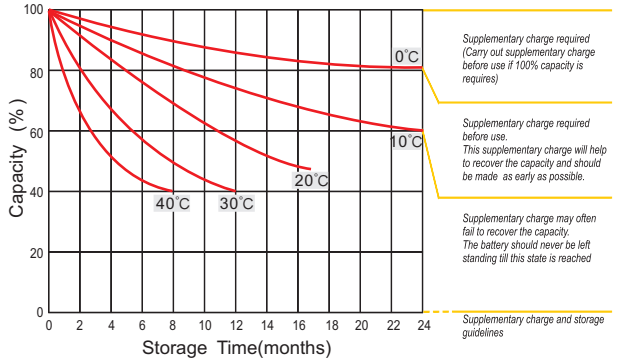
Relationship Between Charging Voltage And Temperature



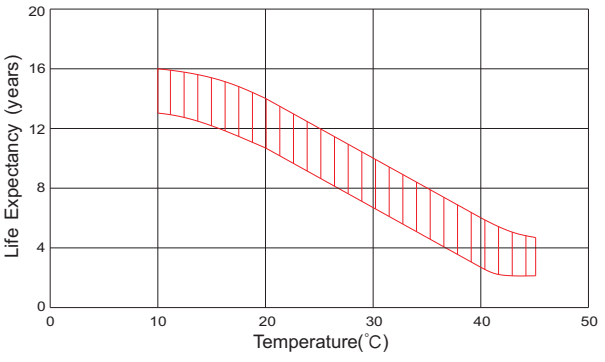
Temperature Effects On Capacity



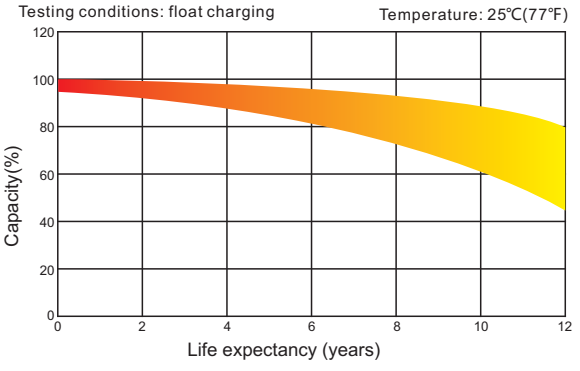
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, MJB reserves the right to explain and update the latest information.

MJBATTERY

Rua Da carreira 115-117 Funchal, Madeira Portugal
E-mail: info@mjbattery.com Version 23A-0

RA12-55(12V55Ah)

MJB

Specification

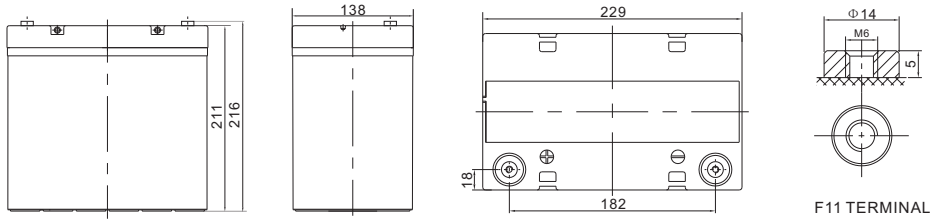
Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	55Ah@10hour-rate to 1.80V per cell @25℃
Weight	Approx. 16.5 Kg (Tolerance±5.0%)
Internal Resistance	≤6.0 mΩ (Full Charge Condition @25℃)
Terminal	Default F11(M6), F15(M6)&L3 Optional
Max. Discharge Current	550A (5 sec)
Short Circuit Current	1160A
Design Life	12 years
Max. Charging Current	16.5 A
Reference Capacity	C_3 41.4Ah C_5 46.8Ah C_{10} 55.0Ah C_{20} 58.2Ah
Float Charging Voltage	13.5 V~13.8 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	MJB Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25℃. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD210316008513EC

Dimensions



F11 TERMINAL

Length	229±2mm (9.02 inches)
Width	138±2mm (5.43 inches)
Height	211±2mm (8.31 inches)
Total Height	216±2mm (8.50 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℃)

F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	176.2	134.2	102.0	60.2	33.6	20.0	15.5	12.2	10.4	6.97	5.80	3.04
1.65V	169.8	126.8	97.5	57.8	32.5	19.4	15.0	11.9	10.1	6.90	5.73	2.99
1.70V	161.5	116.8	91.3	55.3	31.4	18.7	14.6	11.5	9.84	6.79	5.65	2.95
1.75V	150.9	106.9	85.0	52.8	30.2	18.1	14.2	11.2	9.60	6.69	5.57	2.91
1.80V	137.5	96.8	78.5	50.5	29.1	17.4	13.8	10.9	9.35	6.58	5.50	2.89
1.85V	121.0	79.1	65.1	43.5	26.1	16.0	12.7	10.2	8.72	6.18	5.18	2.74

Constant Power Discharge Characteristics : W/Cell (25℃)

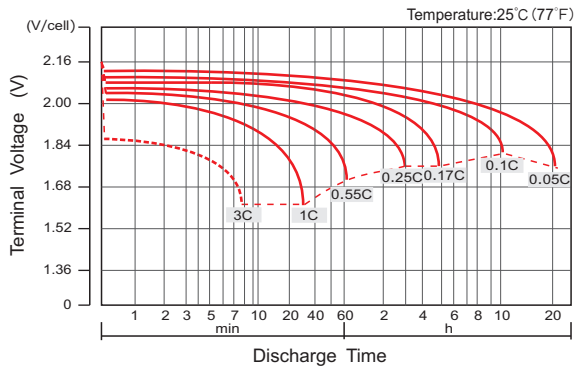
F.V/Time	5MIN	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	303.3	228.2	178.3	109.4	63.1	37.9	29.6	23.4	20.0	13.6	11.4	5.98
1.65V	300.1	219.8	173.0	106.1	61.3	36.9	28.8	22.9	19.6	13.5	11.3	5.89
1.70V	288.6	206.0	164.4	102.5	59.7	35.9	28.2	22.3	19.1	13.3	11.1	5.83
1.75V	274.5	192.0	155.2	98.9	57.9	34.8	27.5	21.8	18.7	13.2	11.0	5.76
1.80V	254.4	176.8	145.4	95.5	56.0	33.7	26.7	21.3	18.3	13.0	10.9	5.71
1.85V	227.9	147.1	122.3	83.1	50.5	31.1	24.8	19.9	17.1	12.2	10.2	5.43

(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_{10} should reach 95% after the first cycle and 100% after the third cycle.

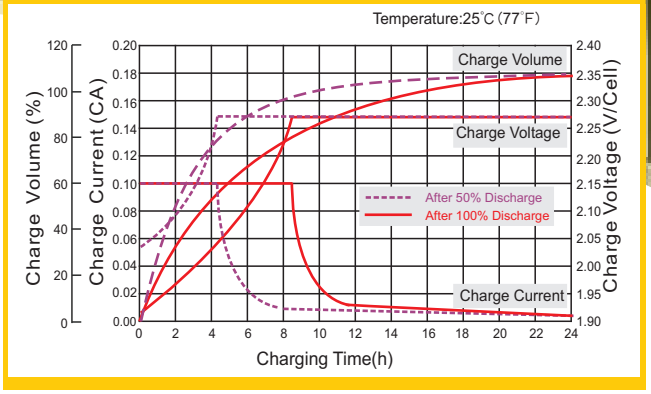
RA12-55(12V55Ah)

MJB

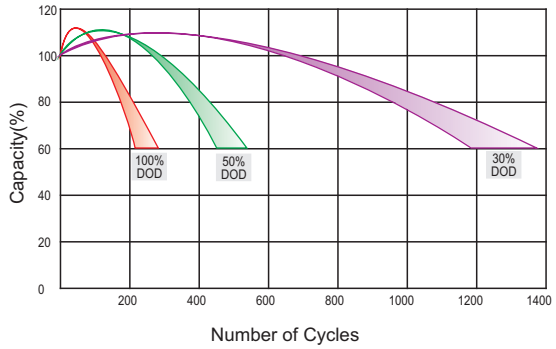
Discharge Characteristics Curve



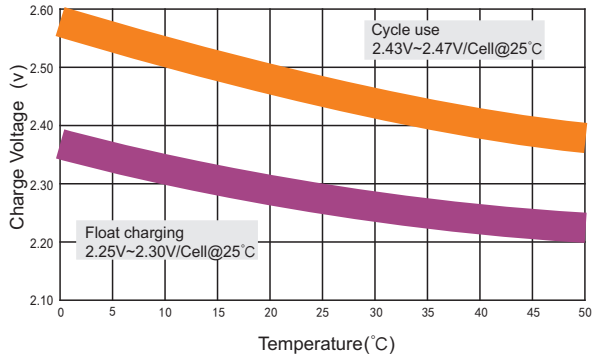
Charge Characteristic Curve For Standby Use(IU)



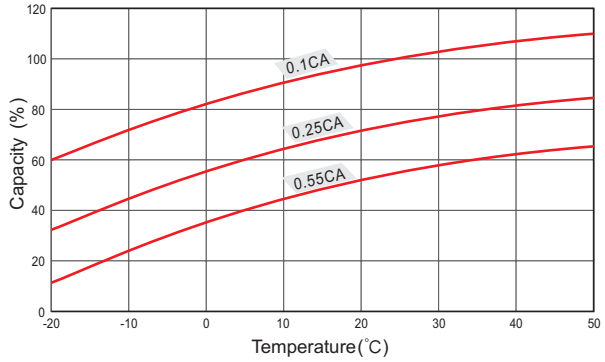
Cycle Life In Relation To Depth Of Discharge



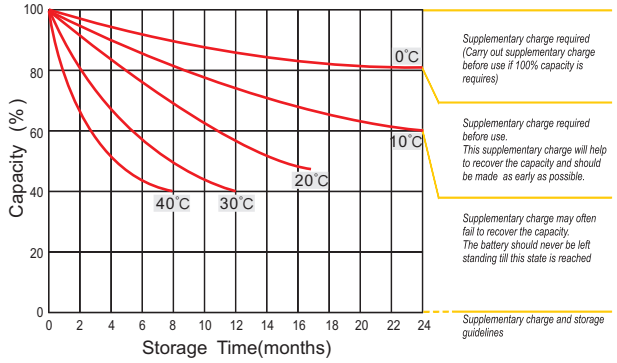
Relationship Between Charging Voltage And Temperature



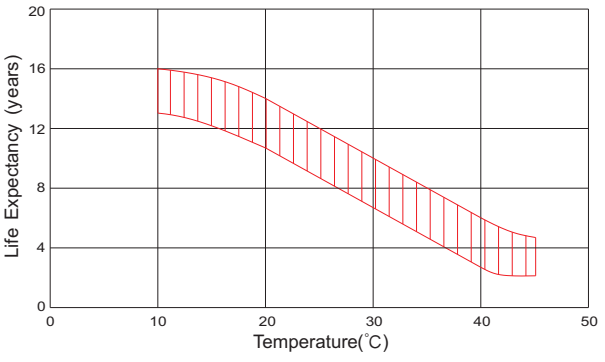
Temperature Effects On Capacity



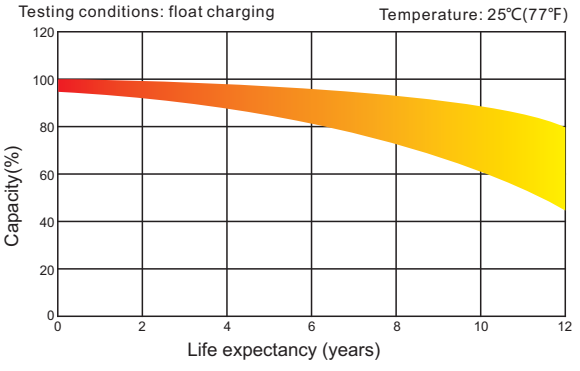
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



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MJBATTERY

Rua Da carreira 115-117 Funchal, Madeira Portugal
E-mail: info@mjbattery.com Version 23A-0

RA12-35(12V35Ah)

Specification

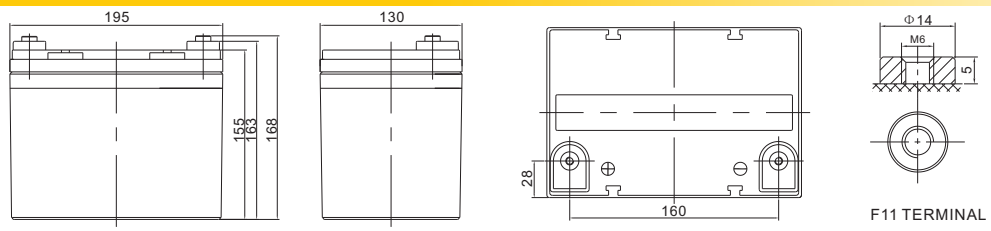
Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	35Ah@10hour-rate to 1.80V per cell @25℃
Weight	Approx. 10.5 Kg (Tolerance±5.0%)
Internal Resistance	≤10.0 mΩ (Full Charge Condition @25℃)
Terminal	Default F11(M6), F7(M8) Optional
Max. Discharge Current	350A (5 sec)
Short Circuit Current	880A
Design Life	12 years
Max. Charging Current	10.5 A
Reference Capacity	C_3 29.6Ah C_5 30.5Ah C_{10} 35.0Ah C_{20} 37.0Ah
Float Charging Voltage	13.5 V~13.8 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	MJB Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25℃. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD210316008513EC

Dimensions



Length	195±2mm (7.68 inches)
Width	130±2mm (5.12 inches)
Height	155±2mm (6.10 inches)
Total Height	168±2mm (6.61 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℃)

F.V/Time	5MIN	10MIN	15MIN	30MIN	60MIN	100MIN	3HR	5HR	8HR	10HR	20HR
1.60V	131.6	92.8	73.2	44.9	27.6	20.1	11.1	6.77	4.44	3.69	1.93
1.67V	121.7	87.1	69.3	42.8	26.3	19.4	10.8	6.59	4.39	3.65	1.90
1.70V	116.7	84.0	67.2	41.5	25.6	18.8	10.5	6.42	4.32	3.59	1.88
1.75V	110.3	78.8	64.0	40.3	25.1	18.2	10.2	6.26	4.26	3.55	1.85
1.80V	103.7	73.7	60.8	39.1	24.7	17.7	9.87	6.10	4.19	3.50	1.84
1.85V	96.7	68.3	57.4	37.7	24.0	17.0	9.12	5.69	3.93	3.29	1.74

Constant Power Discharge Characteristics : W/Cell (25℃)

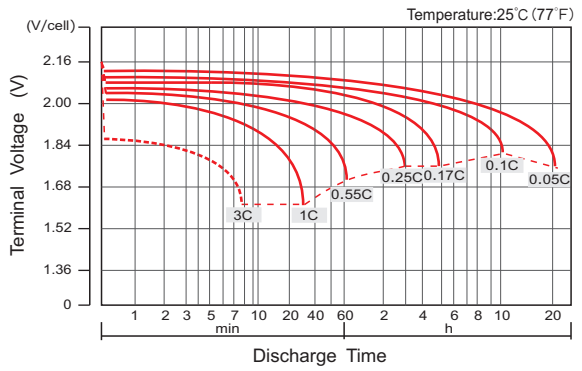
F.V/Time	5MIN	10MIN	15MIN	30MIN	60MIN	100MIN	3HR	5HR	8HR	10HR	20HR
1.60V	234.7	169.0	134.0	82.6	51.0	37.8	21.3	13.0	8.67	7.26	3.80
1.67V	219.3	160.1	128.2	79.5	49.1	36.6	20.7	12.8	8.59	7.18	3.75
1.70V	212.6	156.1	125.7	78.1	48.3	35.7	20.2	12.5	8.47	7.08	3.71
1.75V	203.3	148.5	121.4	76.9	48.2	35.0	19.7	12.2	8.37	7.00	3.67
1.80V	194.0	140.8	116.9	75.6	47.9	34.3	19.2	11.9	8.25	6.92	3.63
1.85V	184.7	133.2	112.6	74.3	47.6	34.1	17.8	11.2	7.76	6.52	3.46

(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_{10} should reach 95% after the first cycle and 100% after the third cycle.

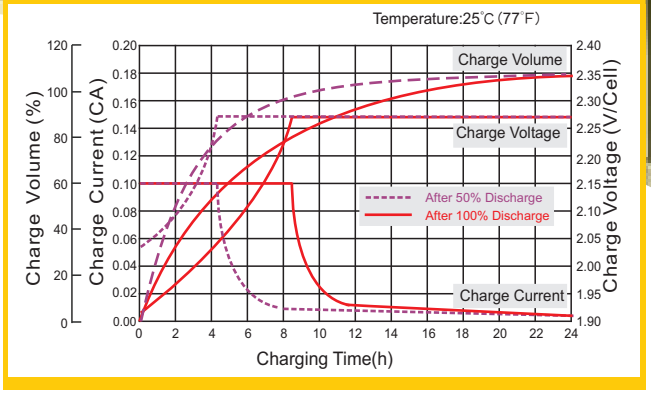
RA12-35(12V35Ah)

MJB

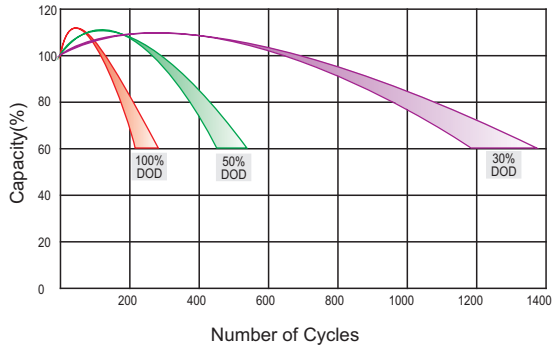
Discharge Characteristics Curve



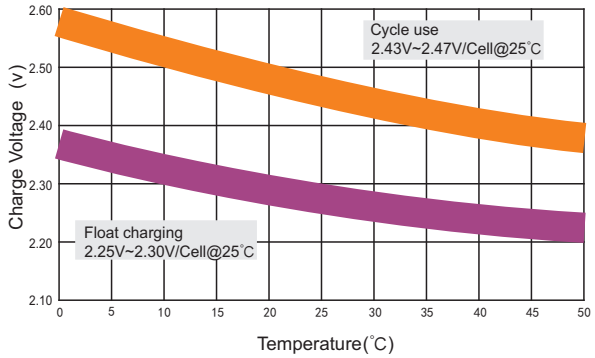
Charge Characteristic Curve For Standby Use(IU)



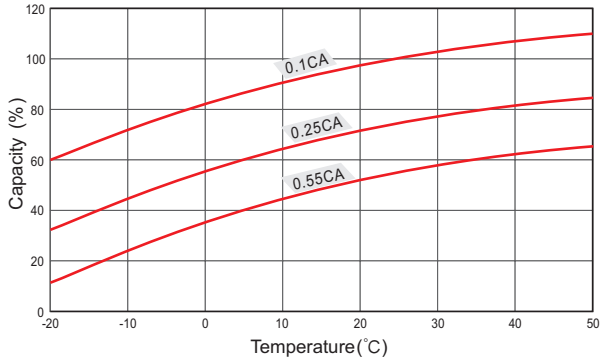
Cycle Life In Relation To Depth Of Discharge



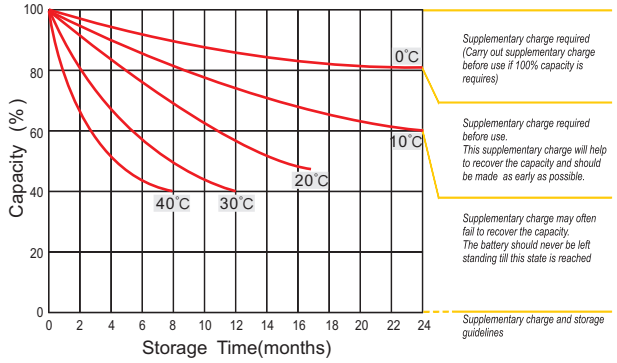
Relationship Between Charging Voltage And Temperature



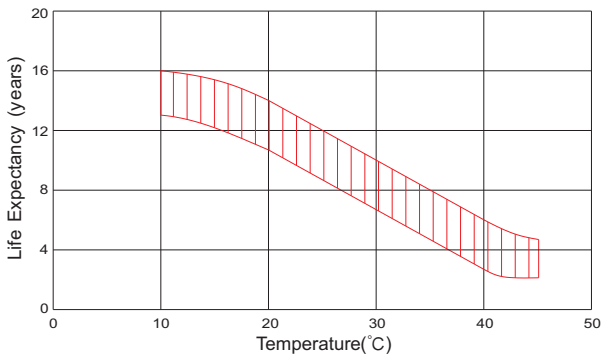
Temperature Effects On Capacity



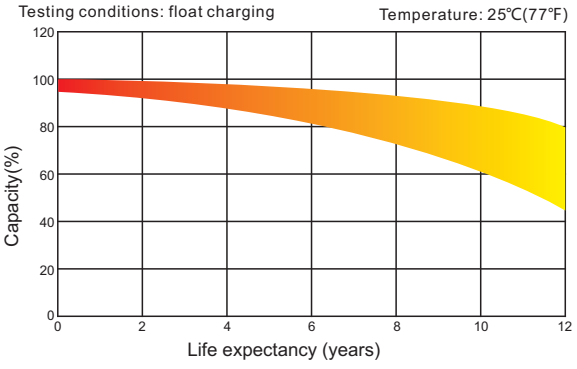
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, MJB reserves the right to explain and update the latest information.

MJBATTERY

Rua Da carreira 115-117 Funchal, Madeira Portugal
E-mail: info@mjbattery.com Version 23A-0

RA12-260(12V260Ah)

Specification

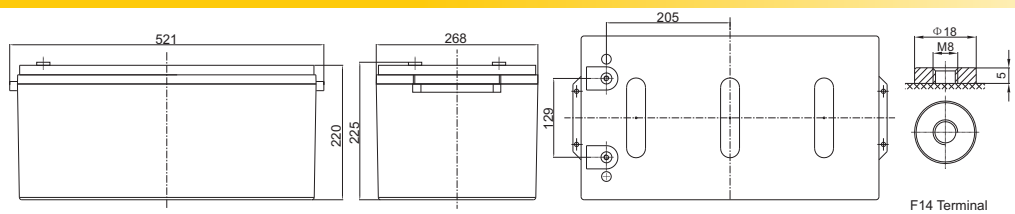
Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	260Ah@10hour-rate to 1.80V per cell @25℃
Weight	Approx. 70.0 Kg (Tolerance±5.0%)
Internal Resistance	≤3.2 mΩ (Full Charge Condition @25℃)
Terminal	Default F14(M8), L6 Optional
Max. Discharge Current	2600A (5 sec)
Short Circuit Current	4810A
Design Life	12 years
Max. Charging Current	78.0 A
Reference Capacity	C_3 195.0Ah C_5 221.0Ah C_{10} 260.0Ah C_{20} 276.0Ah
Float Charging Voltage	13.5 V~13.8 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	MJB Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD2103160008513EC

Dimensions



Length	521±2mm (20.5 inches)
Width	268±2mm (10.6 inches)
Height	220±2mm (8.66 inches)
Total Height	225±2mm (8.86 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℃)

F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	445.9	281.9	158.9	94.6	73.3	57.6	49.1	33.0	27.4	14.3
1.65V	426.3	270.6	153.4	91.6	71.1	56.1	47.8	32.6	27.1	14.1
1.70V	399.3	258.7	148.4	88.6	69.1	54.6	46.5	32.1	26.7	13.9
1.75V	371.6	247.2	143.0	85.5	67.1	53.2	45.4	31.6	26.3	13.8
1.80V	343.1	236.3	137.5	82.4	65.0	51.6	44.2	31.1	26.0	13.6
1.85V	284.7	203.5	123.3	75.5	60.1	48.0	41.2	29.2	24.5	13.0

Constant Power Discharge Characteristics : W/Cell (25℃)

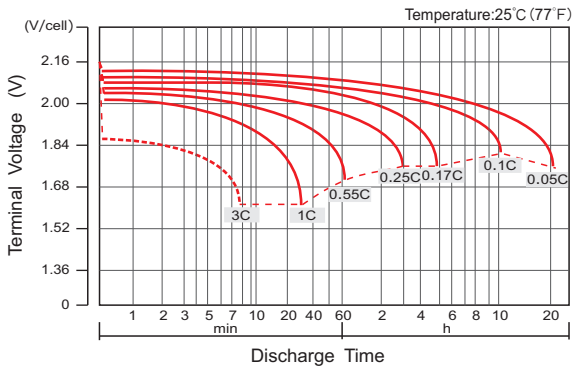
F.V/Time	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	779.5	512.0	298.5	179.4	140.1	110.7	94.6	64.4	53.9	28.2
1.65V	756.3	496.7	289.9	174.5	136.3	108.1	92.4	63.8	53.3	27.8
1.70V	718.9	479.5	282.3	169.7	133.2	105.5	90.4	63.0	52.6	27.5
1.75V	678.8	463.0	273.6	164.5	129.8	103.2	88.4	62.2	52.0	27.2
1.80V	635.6	447.0	264.7	159.4	126.3	100.6	86.4	61.3	51.4	27.0
1.85V	534.9	388.8	238.8	146.9	117.2	93.9	80.8	57.7	48.4	25.7

(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_{10} should reach 95% after the first cycle and 100% after the third cycle.

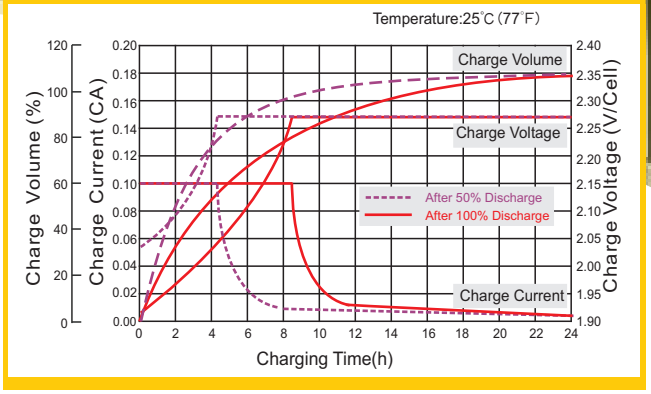
RA12-260(12V260Ah)

MJB

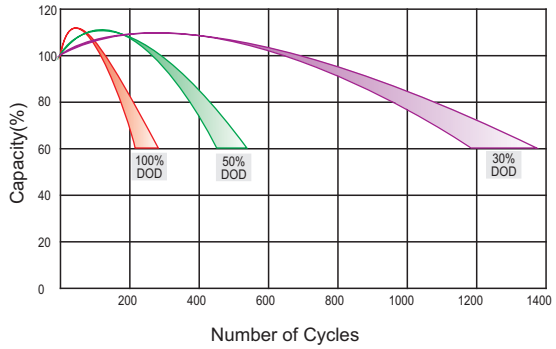
Discharge Characteristics Curve



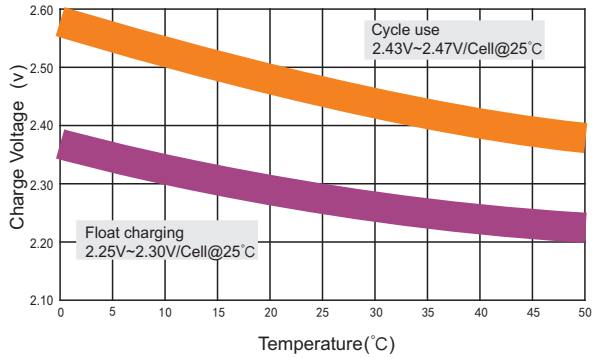
Charge Characteristic Curve For Standby Use(IU)



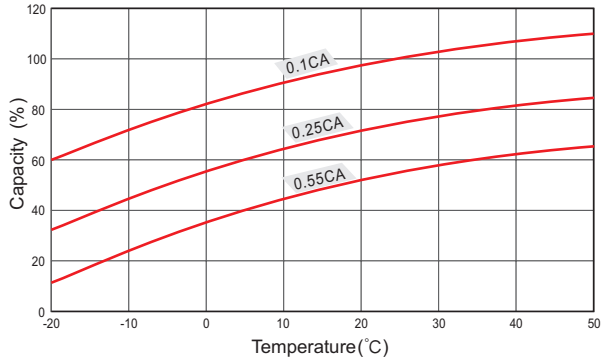
Cycle Life In Relation To Depth Of Discharge



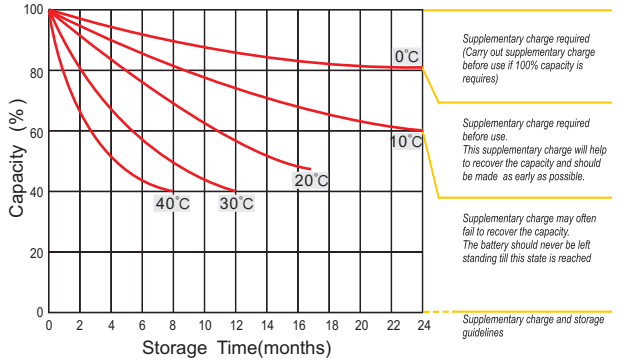
Relationship Between Charging Voltage And Temperature



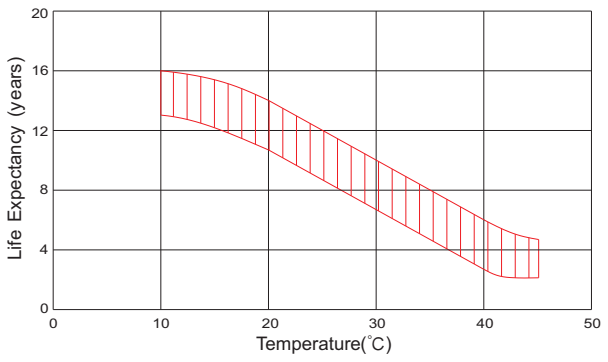
Temperature Effects On Capacity



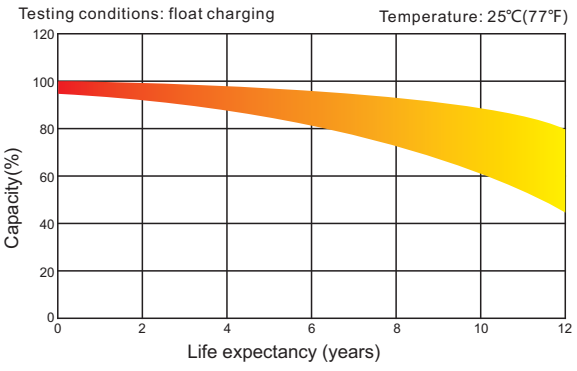
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, MJB reserves the right to explain and update the latest information.

MJBATTERY

Rua Da carreira 115-117 Funchal, Madeira Portugal
E-mail: info@mjbattery.com Version 23A-0

RA12-200(12V200Ah)

Specification

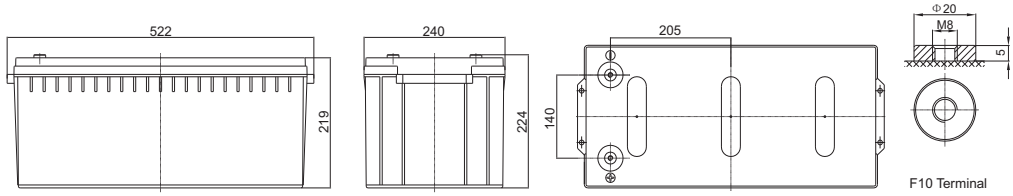
Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	200Ah@10hour-rate to 1.80V per cell @25℃
Weight	Approx. 58.0 Kg (Tolerance±5.0%)
Internal Resistance	≤3.5 mΩ (Full Charge Condition @25℃)
Terminal	Default F10(M8), F16(M8)&L6 Optional
Max. Discharge Current	2000A (5 sec)
Short Circuit Current	3430A
Design Life	12 years
Max. Charging Current	60.0 A
Reference Capacity	C_3 150.0Ah C_5 170.0Ah C_{10} 200.0Ah C_{20} 212.0Ah
Float Charging Voltage	13.5 V~13.8 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	MJB Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD2103160008513EC

Dimensions



Length	522±2mm (20.6 inches)
Width	240±2mm (9.45 inches)
Height	219±2mm (8.62 inches)
Total Height	224±2mm (8.82 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℃)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	439.3	352.3	216.8	122.2	72.8	56.4	44.3	37.7	25.4	21.1	11.0
1.65V	415.1	336.8	208.2	118.0	70.5	54.7	43.1	36.8	25.1	20.8	10.9
1.70V	382.2	315.4	199.0	114.2	68.2	53.2	42.0	35.8	24.7	20.5	10.7
1.75V	349.8	293.5	190.2	110.0	65.8	51.6	40.9	34.9	24.3	20.3	10.6
1.80V	316.7	271.0	181.8	105.8	63.4	50.0	39.7	34.0	23.9	20.0	10.5
1.85V	258.8	224.9	156.5	94.9	58.1	46.2	36.9	31.7	22.5	18.8	10.0

Constant Power Discharge Characteristics : W/Cell (25℃)

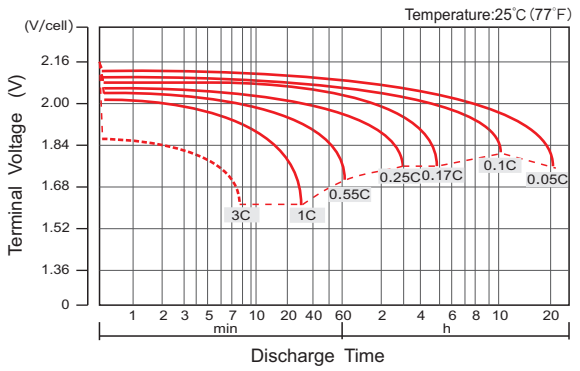
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	746.8	615.8	393.8	229.6	138.0	107.7	85.1	72.7	49.5	41.5	21.7
1.65V	719.3	597.5	382.1	223.0	134.2	104.9	83.1	71.1	49.1	41.0	21.4
1.70V	674.3	568.0	368.8	217.1	130.5	102.5	81.2	69.5	48.4	40.5	21.2
1.75V	628.4	536.2	356.2	210.5	126.5	99.8	79.4	68.0	47.8	40.0	21.0
1.80V	578.7	502.1	343.9	203.6	122.6	97.1	77.4	66.5	47.1	39.5	20.8
1.85V	481.4	422.6	299.1	183.7	113.0	90.2	72.2	62.2	44.4	37.3	19.7

(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_{10} should reach 95% after the first cycle and 100% after the third cycle.

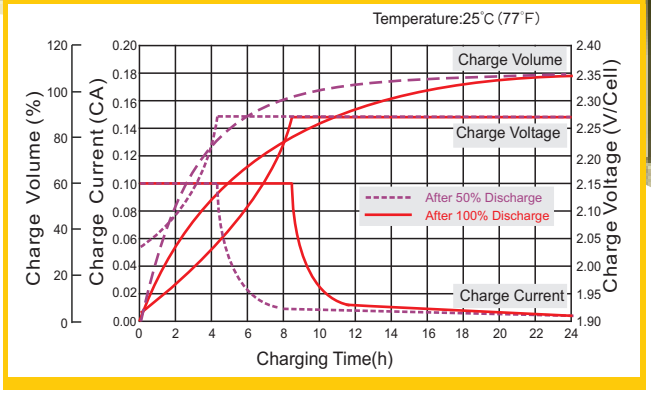
RA12-200(12V200Ah)

MJB

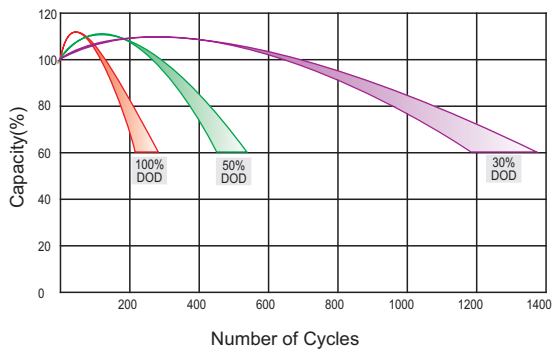
Discharge Characteristics Curve



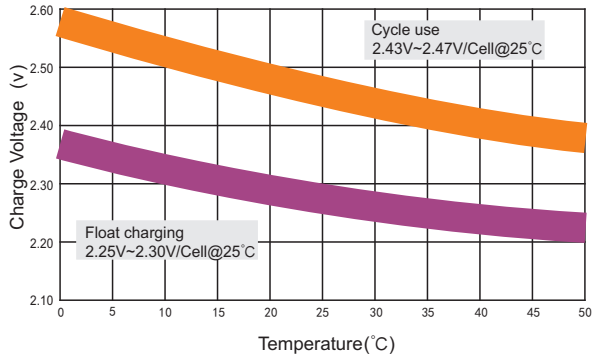
Charge Characteristic Curve For Standby Use(IU)



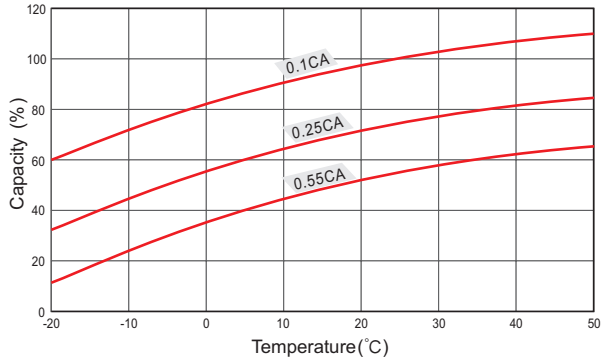
Cycle Life In Relation To Depth Of Discharge



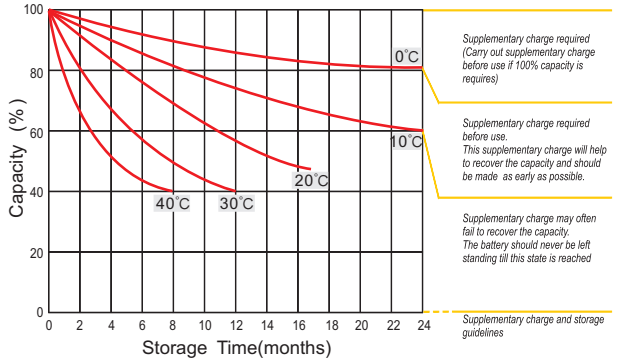
Relationship Between Charging Voltage And Temperature



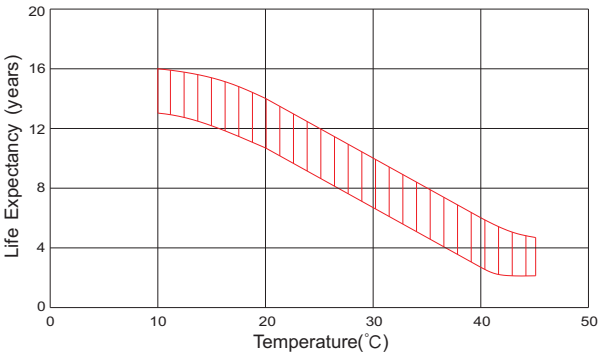
Temperature Effects On Capacity



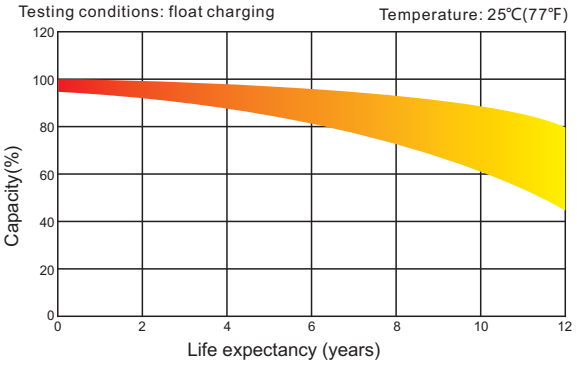
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, MJB reserves the right to explain and update the latest information.

MJBATTERY Rua Da carreira 115-117 Funchal, Madeira Portugal E-mail: info@mjbattery.com

Version 23A-0

RA12-150(12V150Ah)

Specification

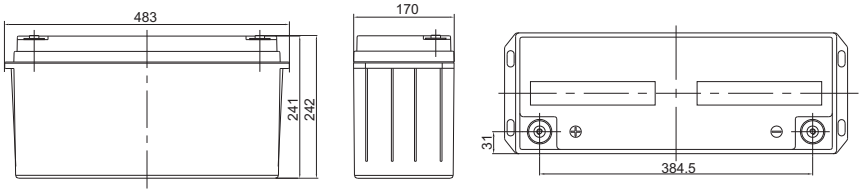
Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	150Ah@10hour-rate to 1.80V per cell @25℃
Weight	Approx. 43.0 Kg (Tolerance±5.0%)
Internal Resistance	≤4.4 mΩ (Full Charge Condition @25℃)
Terminal	Default F12(M8), F5(M8) Optional
Max. Discharge Current	1500A (5 sec)
Short Circuit Current	2700A
Design Life	12 years
Max. Charging Current	45.0 A
Reference Capacity	C_3 112.5Ah C_5 127.5Ah C_{10} 150.0Ah C_{20} 159.0Ah
Float Charging Voltage	13.5 V~13.8 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	MJB Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

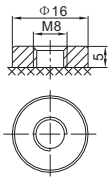
RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD2103160008513EC

Dimensions





F12 Terminal

Length	483±2mm (19.0 inches)
Width	170±2mm (6.69 inches)
Height	241±2mm (9.49 inches)
Total Height	242±2mm (9.53 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℃)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	329.5	264.2	162.6	91.6	54.6	42.3	33.3	28.3	19.0	15.8	8.28
1.65V	311.4	252.6	156.1	88.5	52.9	41.0	32.4	27.6	18.8	15.6	8.15
1.70V	286.6	236.6	149.2	85.6	51.1	39.9	31.5	26.8	18.5	15.4	8.05
1.75V	262.4	220.2	142.6	82.5	49.3	38.7	30.7	26.2	18.3	15.2	7.95
1.80V	237.5	203.3	136.3	79.3	47.6	37.5	29.8	25.5	17.9	15.0	7.87
1.85V	194.1	168.7	117.4	71.2	43.6	34.7	27.7	23.8	16.8	14.1	7.47

Constant Power Discharge Characteristics : W/Cell (25℃)

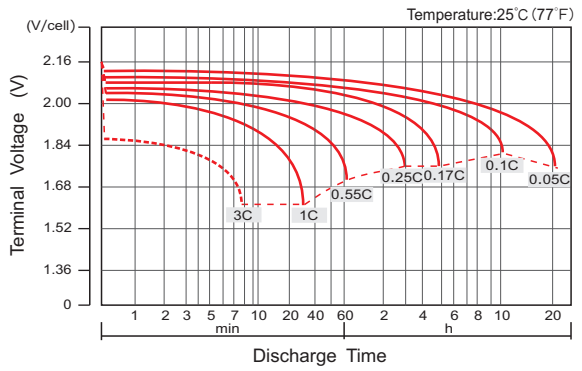
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	560.1	461.9	295.4	172.2	103.5	80.8	63.8	54.5	37.1	31.1	16.3
1.65V	539.4	448.1	286.5	167.3	100.7	78.6	62.3	53.3	36.8	30.8	16.1
1.70V	505.7	426.0	276.6	162.8	97.9	76.8	60.9	52.1	36.3	30.3	15.9
1.75V	471.3	402.2	267.1	157.8	94.9	74.9	59.5	51.0	35.9	30.0	15.7
1.80V	434.0	376.6	257.9	152.7	92.0	72.8	58.0	49.9	35.4	29.6	15.6
1.85V	361.0	317.0	224.3	137.8	84.7	67.6	54.2	46.6	33.3	27.9	14.8

(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_{10} should reach 95% after the first cycle and 100% after the third cycle.

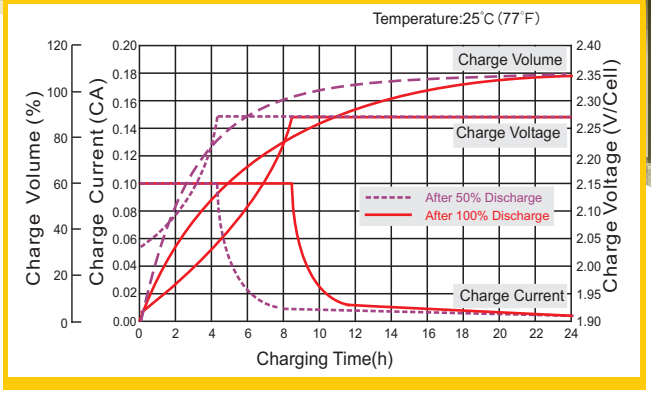
RA12-150(12V150Ah)

MJB

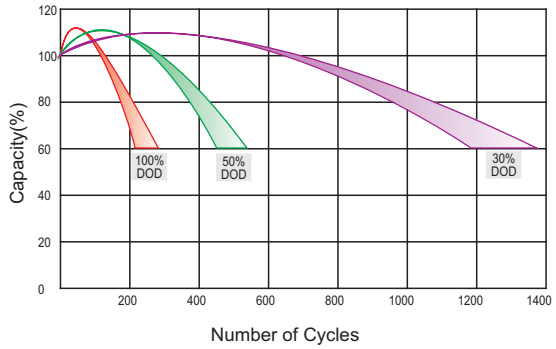
Discharge Characteristics Curve



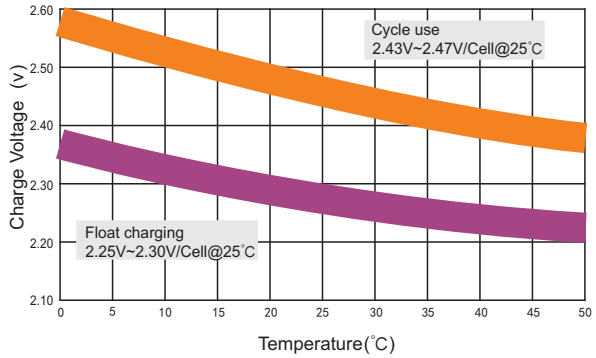
Charge Characteristic Curve For Standby Use(IU)



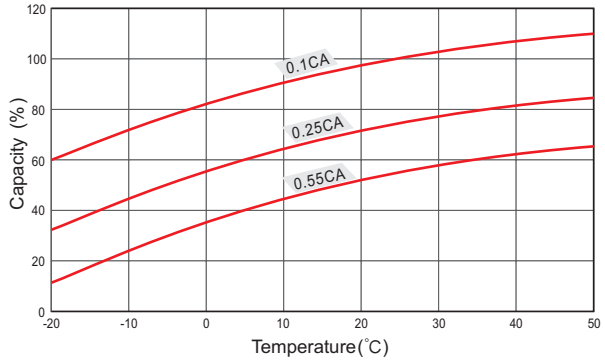
Cycle Life In Relation To Depth Of Discharge



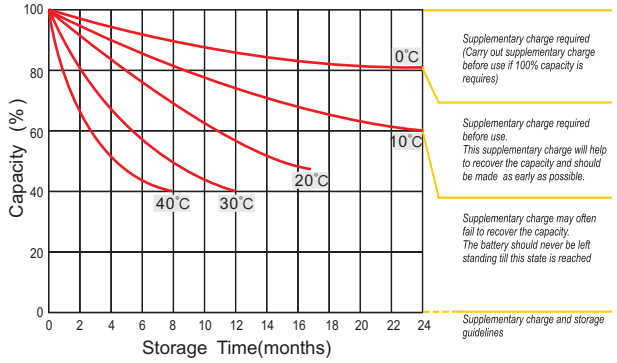
Relationship Between Charging Voltage And Temperature



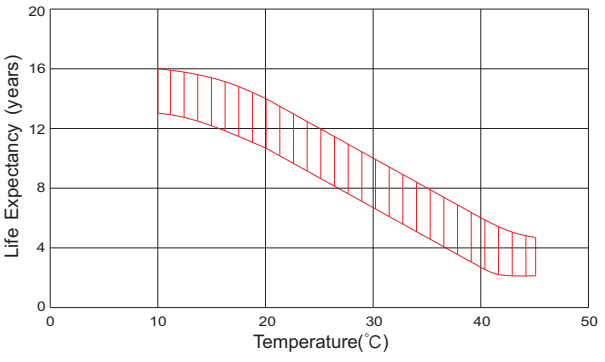
Temperature Effects On Capacity



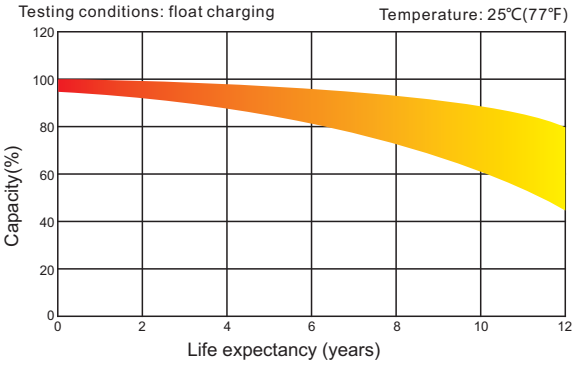
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



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MJBATTERY

Rua Da carreira 115-117 Funchal, Madeira Portugal
E-mail: info@mjbattery.com Version 23A-0

RA12-100(12V100Ah)

Specification

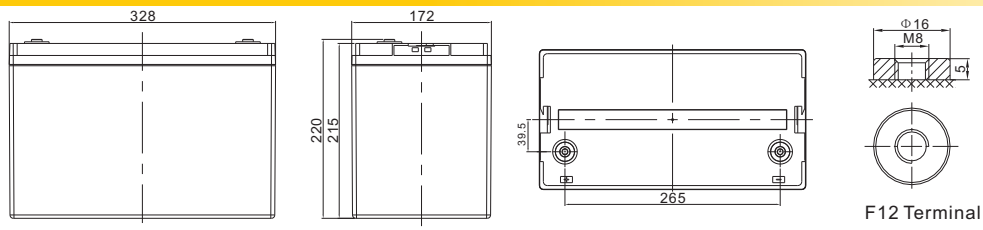
Cells Per Unit	6
Voltage Per Unit	12V
Nominal Capacity	100Ah@10hour-rate to 1.80V per cell @25℃
Weight	Approx. 28.5 Kg (Tolerance±5.0%)
Internal Resistance	≤5.5 mΩ (Full Charge Condition @25℃)
Terminal	Default F12(M8), F5(M8)&L7 Optional
Max. Discharge Current	1000A (5 sec)
Short Circuit Current	2150A
Design Life	12 years
Max. Charging Current	30.0 A
Reference Capacity	C_3 75.0Ah C_5 85.0Ah C_{10} 100.0Ah C_{20} 106.0Ah
Float Charging Voltage	13.5 V~13.8 V @ 25℃ Temperature Compensation: -3mV/℃/Cell
Cycle Use Voltage	14.6 V~14.8 V @ 25℃ Temperature Compensation: -4mV/℃/Cell
Operating Temperature Range	Discharge: -20℃~60℃ Charge: 0℃~50℃ Storage: -20℃~60℃
Normal Operating Temperature Range	25℃±5℃
Self Discharge	MJB Valve Regulated Lead Acid (VRLA) batteries can be stored for up to 6 months at 25℃ and then recharging is recommended. Monthly Self-discharge ratio is less than 3% at 25. Please charge batteries before using.
Container Material	A.B.S. UL94-HB, UL94-V0 Optional.

RA series is a general purpose battery with 12 years design life in float service. It meets with IEC, JIS, BS, GB/T and YD/T standards. With advanced AGM valve regulated technology and high purity raw material, the RA series battery maintains high consistency for better performance and reliable standby service life. It is suitable for UPS/EPS, Telecom, power grid, medical equipment, emergency light and security system applications.

ISO 9001 ISO 14001 ISO 45001

MH 28539 BSTXD2103160008513EC

Dimensions



F12 Terminal

Length	328±2mm (12.9 inches)
Width	172±2mm (6.77 inches)
Height	215±2mm (8.46 inches)
Total Height	220±2mm (8.66 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℃)

F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	231.9	185.4	109.5	61.1	36.4	28.2	22.2	18.9	12.7	10.5	5.52
1.65V	219.1	177.3	105.1	59.0	35.2	27.3	21.6	18.4	12.5	10.4	5.43
1.70V	201.7	166.0	100.5	57.1	34.1	26.6	21.0	17.9	12.3	10.3	5.36
1.75V	184.6	154.5	96.0	55.0	32.9	25.8	20.4	17.4	12.2	10.1	5.30
1.80V	167.1	142.7	91.8	52.9	31.7	25.0	19.9	17.0	12.0	10.0	5.25
1.85V	136.6	118.4	79.1	47.4	29.1	23.1	18.5	15.9	11.2	9.41	4.98

Constant Power Discharge Characteristics : W/Cell (25℃)

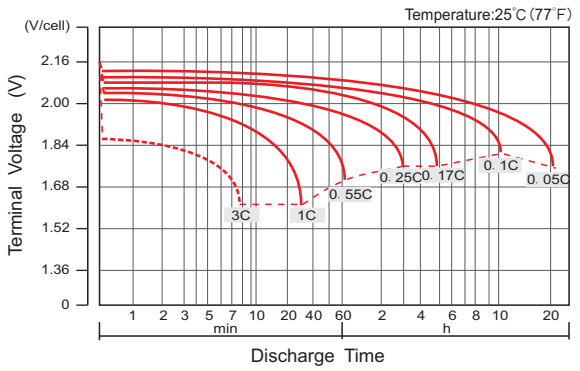
F.V/Time	10MIN	15MIN	30MIN	1HR	2HR	3HR	4HR	5HR	8HR	10HR	20HR
1.60V	394.1	324.1	198.9	114.8	69.0	53.9	42.6	36.4	24.8	20.7	10.9
1.65V	379.6	314.5	193.0	111.5	67.1	52.4	41.6	35.6	24.5	20.5	10.7
1.70V	355.9	298.9	186.3	108.6	65.3	51.2	40.6	34.8	24.2	20.2	10.6
1.75V	331.6	282.2	179.9	105.2	63.3	49.9	39.7	34.0	23.9	20.0	10.5
1.80V	305.4	264.3	173.7	101.8	61.3	48.6	38.7	33.2	23.6	19.8	10.4
1.85V	254.1	222.4	151.1	91.9	56.5	45.1	36.1	31.1	22.2	18.6	9.87

(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_{10} should reach 95% after the first cycle and 100% after the third cycle.

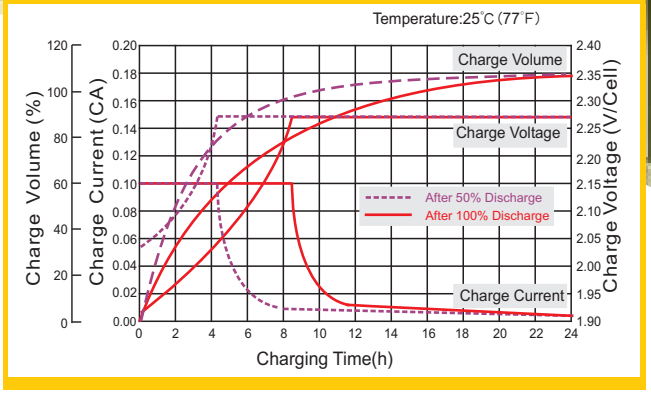
RA12-100(12V100Ah)

MJB

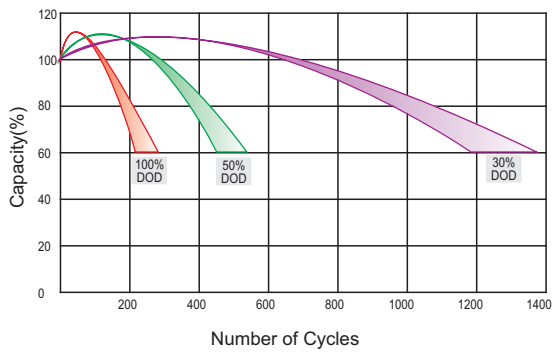
Discharge Characteristics Curve



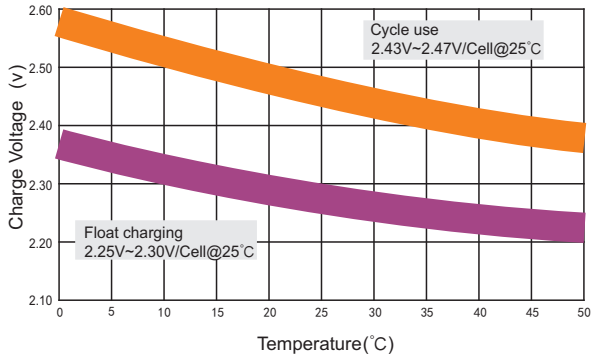
Charge Characteristic Curve For Standby Use(IU)



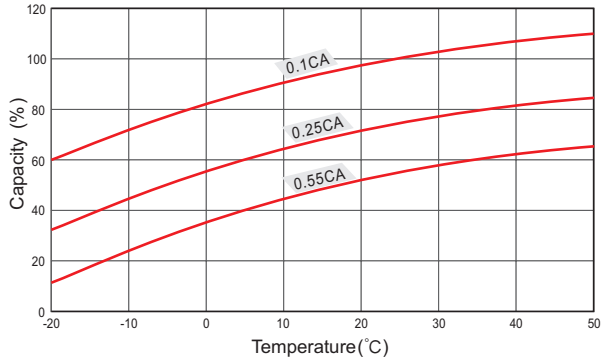
Cycle Life In Relation To Depth Of Discharge



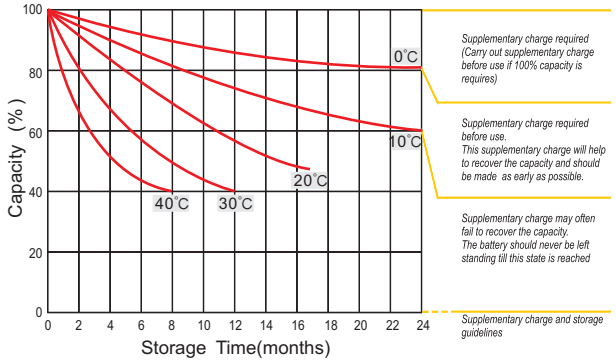
Relationship Between Charging Voltage And Temperature



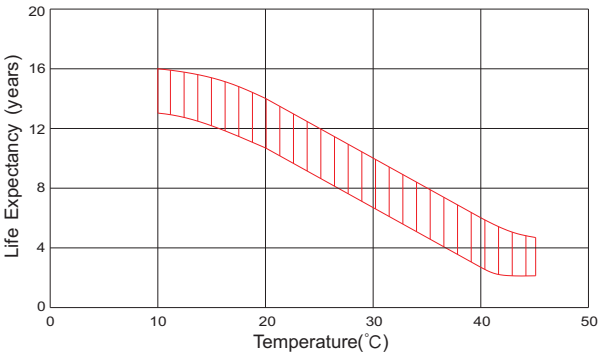
Temperature Effects On Capacity



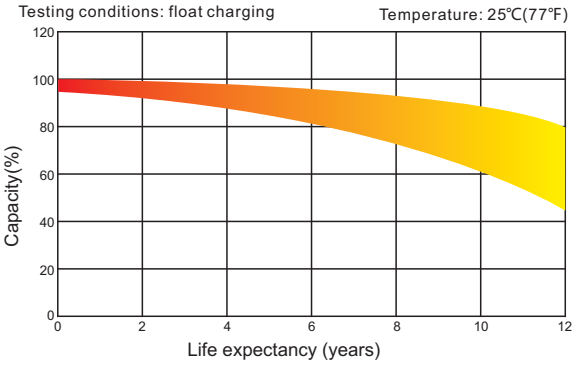
Storage Characteristics



Effect Of Temperature On Long Term Life



Life Characteristics Of Standby Use



(Note) All above information shall be changed without prior notice, MJB reserves the right to explain and update the latest information.

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