

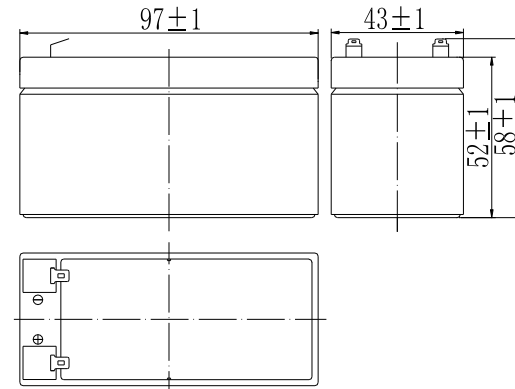
## BW 1213 (12V1.3Ah)

### SPECIFICATIONS

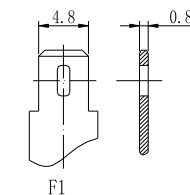
Nominal Voltage		12 V						
Capacity (25°C)	20HR	1.2 Ah						
	10HR	1.1 Ah						
	1HR	0.78 Ah						
Dimension	Length	97 ± 1mm (3.82inch)						
	Width	43 ± 1mm (1.69inch)						
	Height	52 ± 1mm (2.05inch)						
	Total Height	58 ± 1mm (2.28inch)						
Approx. Weight		0.55kg (1.21lbs) ± 5%						
Terminal type		F1						
Internal resistance (Fully charged, 25°C)		Approx. 95m Ω						
Capacity affected by temperature (20HR)	40°C	102%						
	25°C	100%						
	0°C	85%						
	-15°C	65%						
Self-discharge (25°C)	3 month	Remaining Capacity: 91%						
	6 month	Remaining Capacity: 82%						
	12 month	Remaining Capacity: 65%						
Nominal operating temperature		25°C ± 3°C (77°F ± 5°F)						
Operating temperature range	Discharge	-15°C ~ 50°C (5°F ~ 122°F)						
	Charge	-10°C ~ 50°C (14°F ~ 122°F)						
	Storage	-20°C ~ 50°C (-4°F ~ 122°F)						
Float charging voltage(25°C)		13.60 to 13.80V Temperature compensation: -18mV/°C						
Cyclic charging voltage(25°C)		14.50 to 15.00V Temperature compensation: -30mV/°C						
Maximum charging current		0.36A						
Maximum discharge current		18 A(5 sec.)						
Designed floating life(20°C)		5 years						
Component	Positive plate	Negative plate	Container	Cover	Separator	Electrolyte	Safety valve	Terminal
Raw material	Lead dioxide	Lead	ABS	ABS	AGM	Sulfuric acid	Rubber	Copper



### DIMENSIONS



### TERMINAL



### CONSTRUCTION

### CONSTANT CURRENT DISCHARGE CHARACTERISTICS (A, 25°C)

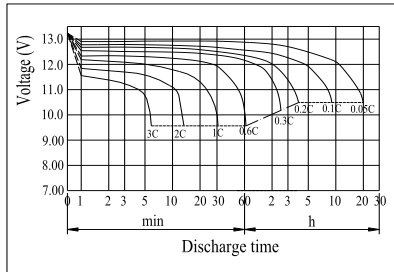
F.V/TIME	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	4.58	2.90	2.27	1.28	0.79	0.43	0.30	0.25	0.21	0.11	0.06
9.90V	4.45	2.82	2.21	1.25	0.77	0.43	0.30	0.24	0.21	0.11	0.06
10.2V	4.26	2.70	2.13	1.21	0.75	0.42	0.29	0.24	0.21	0.11	0.06
10.5V	4.08	2.58	2.06	1.18	0.74	0.42	0.29	0.24	0.21	0.11	0.06
10.8V	3.85	2.44	1.95	1.14	0.72	0.41	0.28	0.23	0.20	0.11	0.06

**CONSTANT POWER DISCHARGE CHARACTERISTICS (WATT, 25°C)**

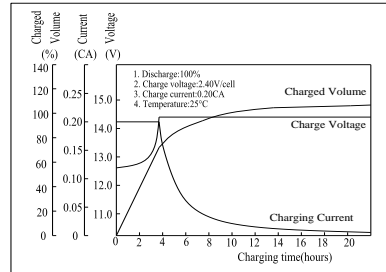
F.V/TIME	5min	10min	15min	30min	60min	2h	3h	4h	5h	10h	20h
9.60V	51.2	32.8	25.9	14.6	9.10	5.03	3.53	2.93	2.50	1.36	0.73
9.90V	49.6	31.8	25.2	14.4	8.97	5.00	3.51	2.91	2.48	1.36	0.73
10.2V	47.6	30.5	24.3	13.9	8.74	4.96	3.49	2.89	2.47	1.35	0.72
10.5V	45.5	29.2	23.5	13.6	8.56	4.88	3.46	2.87	2.45	1.34	0.72
10.8V	43.0	27.5	22.2	13.1	8.30	4.76	3.36	2.79	2.38	1.32	0.71

Note: The above characteristics data can be obtained within three charge/discharge cycles.

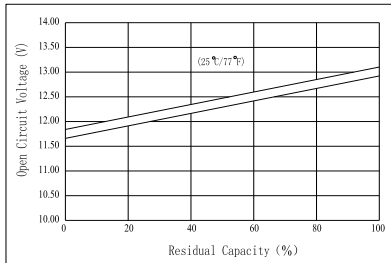
**Discharge Characteristics (25°C)**



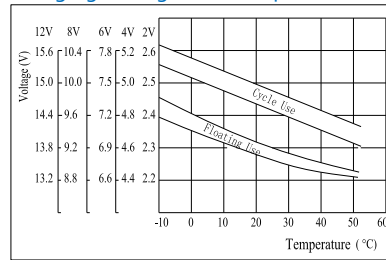
**Charging Characteristics (25°C)**



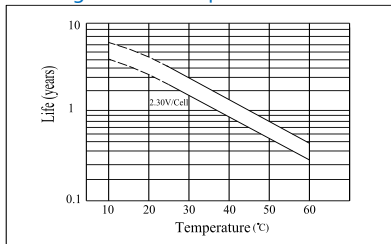
**The Relationship for Open Circuit Voltage and Residual Capacity (25°C)**



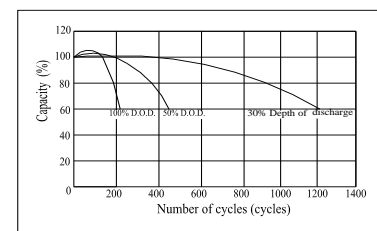
**The Relationship for Charging Voltage and Temperature**



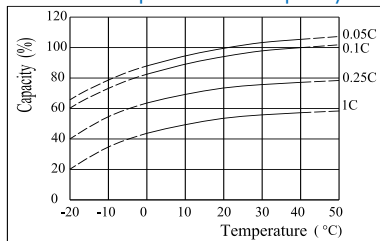
**Floating Life on Temperature**



**Cycle Life on D.O.D (25°C)**



**Effect of Temperature on Capacity**



**Self-discharge Characteristics**

