

## KBHR1254 12V 5.4Ah

The Kaise HR batteries were specially designed for applications that demand a very high energy output. With an optimized design of the grids and an excellent formula for pasting the plates, the HR series can deliver up to 40% more than the standard series.



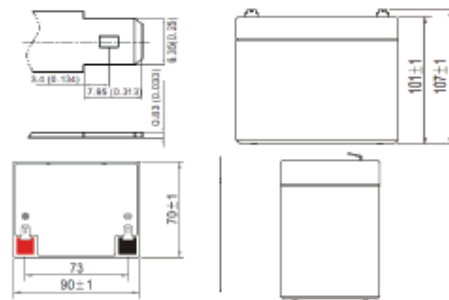
### Performance Characteristics

Nominal Voltage	12V	
Dimensions	Length (mm / inch)	90 / 3.54
	Width (mm / inch)	70 / 2.76
	Height (mm / inch)	101 / 3.98
	Total Height (mm / inch)	107 / 4.21
Approx Weight	(Kg / lbs) 1.77 / 3.90	
Design Life	5 years	
Terminal	Faston F2	
Container Material	ABS	
Rated Capacity	20.8 Watts/cell	(15min, 1.6V / cell, 25°C / 77°F)
	5.4Ah	(20hr, 1.8V / cell, 25°C / 77°F)
Max. Discharge Current	81A (5s)	
Internal Resistance	Approx 25mΩ	
Operating Temp. Range	Discharge : -15 - 50°C (5 - 131°F)	
	Charge : 0 - 40°C (32 - 104°F)	
	Storage : -15 - 40°C (5 - 104°F)	
Nominal Operating Temp. Range	25 ± 3°C (77 ± 5°F)	
Cycle Use	Initial Charging Current less than 1.08A	
	Voltage: 14.4V - 14.7V at 25°C (77°F)	
	Temp. Coefficient: -30mV/°C	
Standby Use	Initial Charging Current less than 1.08A	
	Voltage: 13.5V - 13.8V at 25°C (77°F)	
	Temp. Coefficient: -20mV/°C	
Capacity affected by Temperature	40°C (104°F)	103%
	25°C (77°F)	100%
	0°C (32°F)	86%
Self Discharge	Fully charged Kaise High Rate Series batteries may be stored for up to 6 months at 25°C (77°F) and then a freshening charge is required. For higher temperatures the time interval will be shorter.	

### Discharge Constant Current (Amperes) at 77°F (25°C)

Volts/cell	10min	15min	20min	30min	1h
1.8V	13.1	10.1	8.27	6.08	3.41
1.75V	13.9	10.7	8.69	6.32	3.52
1.7V	14.6	11.2	9.02	6.57	3.61
1.6V	15.5	11.8	9.49	6.83	3.74

### Dimensions and Terminal (Unit: mm (inches))



### Applications

UPS  
High power backup supply  
Electric facilities  
Power tools

### Certifications

ISO 9001:2008 ISO 14001:2008



### Discharge Current vs. Discharge Voltage

Final discharge voltage VCELL	1.8	1.75	1.7	1.6
Discharge current (A)	I ≤ 0.10A	0.250A ≥ I > 0.10A	0.550A ≥ I > 0.250A	I > 0.550A

### Discharge Constant Power (Watts per cell) at 77°F (25°C)

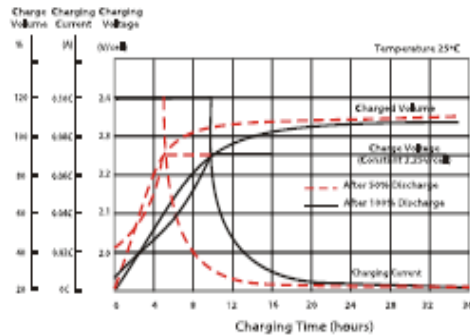
Volts/cell	10min	15min	20min	30min	1h
1.8V	24.1	18.6	15.5	11.5	6.54
1.75V	25.2	19.6	16.1	11.8	6.73
1.7V	26.2	20.3	16.6	12.2	6.88
1.6V	27.0	20.8	17.0	12.4	7.04

[Note] The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

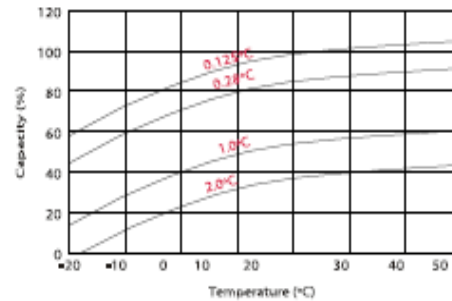
# KBHR1254 12V 5.4Ah



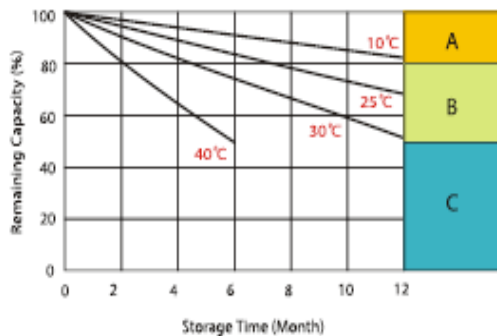
## Charging Characteristics (cycle use)



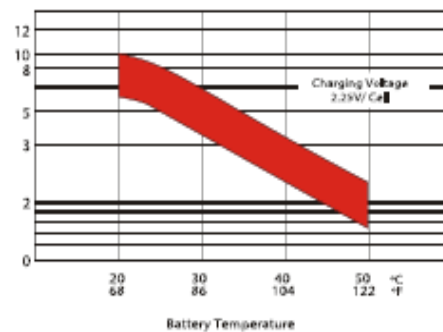
## Temperature Effects in Relation to Battery Capacity



## Self Discharge Characteristics



## Effect of Temperature on Long Term Float Life



- A** No supplementary charge required  
(carry out supplementary charge before use if 100% capacity is required)
- B** Supplementary charge required before use. Optional charging way is below:
  1. Charged for above 3 days at limited current 0.25 CA and constant voltage 2.25V / cell.
  2. Charged for above 20 hours limited current 0.25CA and constant voltage 2.46V / cell.
  3. Charged for 6-10 hours at limited current 0.05 CA.
- C** Supplementary charge often fail to recover the capacity.  
The battery should never be left standing till this is reached.

IMPORTANT NOTE: The specifications presented herein are subject to revision without notice.

