

# 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.



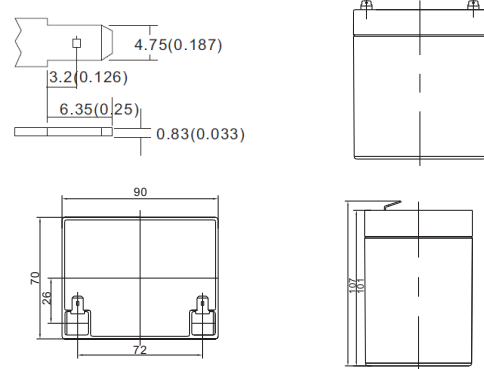
## Performance Characteristics

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)	1.51 / 3.33
Capacity	20W@15min-rate to 1.67V per cell @25°C	
Design Life	8 years	
Terminal	F2	
Container Material	A.B.S. UL94-HB, UL94-V0 Optional	
Reference Capacity	C10	4.6Ah
	C20	5.0Ah
Max. Discharge Current	50A (5s)	
Internal Resistance	Approx 36mΩ	
Operating Temp. Range	Discharge : -20 ~ 60°C (-4 ~ 140°F)	
	Charge : 0 ~ 50°C (32 ~ 122°F)	
	Storage : -20 ~ 60°C (-4 ~ 140°F)	
Nominal Operating Temp. Range	25 ± 5°C (77 ± 41°F)	
Cycle Use	Initial Charging Current less than 1.5A	
	Voltage: 14.6V ~ 14.8V at 25°C (77°F)	
	Temp. Coefficient: -4mV/°C	
Standby Use	Initial Charging Current less than 1.5A	
	Voltage: 13.7V ~ 13.9V at 25°C (77°F)	
	Temp. Coefficient: -3mV/°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	1.5h
1.80V	12.19	9.417	7.573	5.494	3.155	2.266
1.75V	13.07	9.917	7.947	5.744	3.278	2.349
1.70V	13.95	10.50	8.364	5.995	3.392	2.422
1.67V	14.47	10.83	8.594	6.147	3.467	2.468
1.60V	15.70	11.58	9.104	6.487	3.638	2.579

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



## Applications

- UPS
- High power backup supply
- Electric facilities
- Power tools

## Certifications

ISO 9001 / ISO 14001



## Discharge Current vs. Discharge Voltage

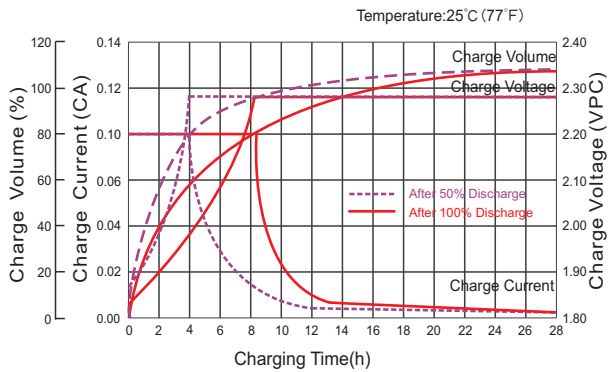
Final discharge voltage V/CELL	1.8	1.75	1.7	1.6
Discharge current (A)	$I \leq 0.1CA$	$0.25CA \geq I > 0.1CA$	$0.55CA \geq I > 0.25CA$	$I > 0.55CA$

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

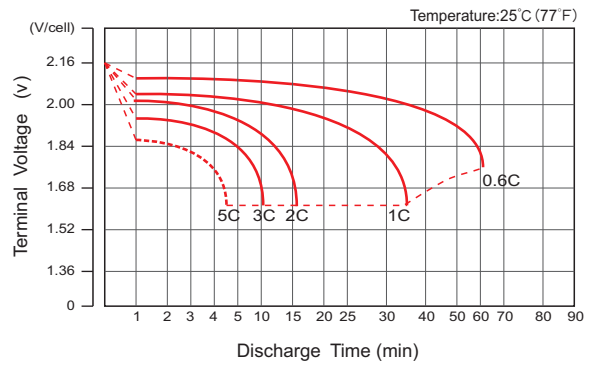
Volts/cell	10min	15min	20min	30min	1h	1.5h
1.80V	23.07	17.83	14.46	10.56	6.101	4.403
1.75V	24.47	18.67	15.06	10.92	6.281	4.522
1.70V	25.79	19.58	15.66	11.27	6.461	4.642
1.67V	26.58	20.00	16.00	11.54	6.565	4.716
1.60V	28.42	21.17	16.76	11.99	6.821	4.882

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

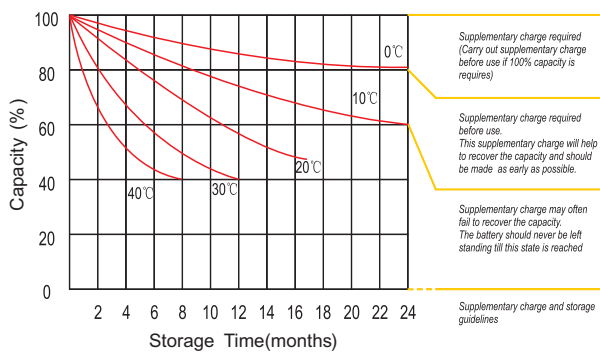
## Charge Characteristic Curve For Standby Use



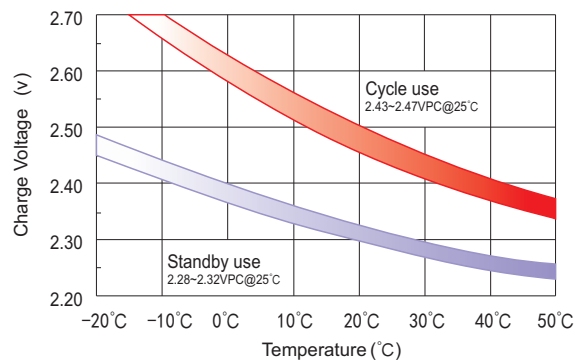
## Discharge Characteristics Curve



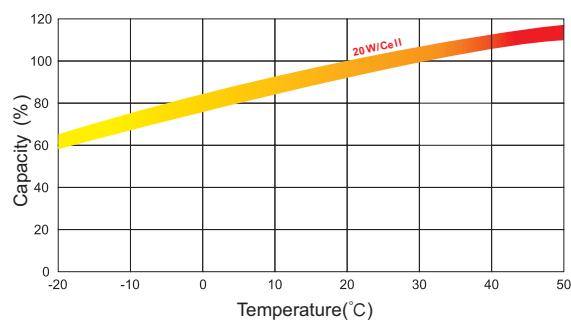
## Storage Characteristics



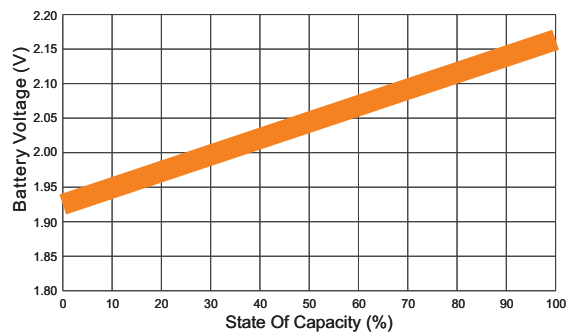
## Relationship Between Charging Voltage And Temperature



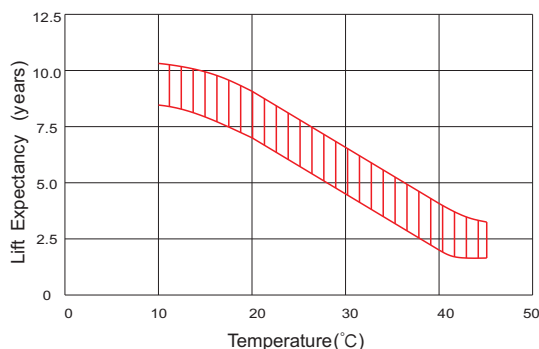
## Temperature Effects On Capacity



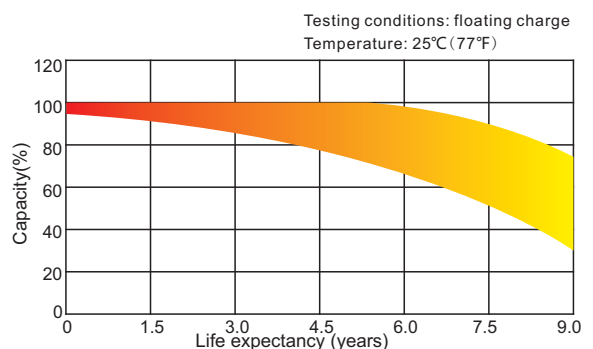
## Relationship of OCV And State of Charge (20°C)



## Effect Of Temperature On Long Term Life



## Life Characteristics Of Standby Use



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

