

Hitachi Chemical

HITACHI



High Rate Purpose
High Energy Density
ENERGY OF INFINITY ▶

UPS series

BATTERY

CSB



Hitachi Chemical Energy Technology Co., Ltd.

BATTERY

UPS123606

Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

FV/Time	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	61.7	41.2	35.3	31.1	24.7	20.7	15.2	12.1	8.90	6.43	5.10	3.64
1.67V	55.0	38.8	33.7	30.1	24.0	20.4	15.1	12.1	8.84	6.38	5.06	3.62
1.70V	52.2	37.5	32.6	29.2	23.6	20.1	15.0	12.0	8.81	6.34	5.02	3.61
1.75V	47.1	34.6	30.8	27.2	22.5	19.2	14.6	11.8	8.68	6.26	4.97	3.58
1.80V	42.4	31.4	27.6	24.8	20.7	18.0	13.9	11.3	8.40	6.11	4.88	3.52
1.85V	36.8	27.0	24.1	21.7	18.5	16.4	12.7	10.5	7.95	5.79	4.63	3.38

Constant Power Discharge Characteristics Unit: W (25°C, 77°F)

FV/Time	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	568	403	360	318	259	222	169	135	100	73.0	58.4	42.4
1.67V	529	388	347	308	254	218	167	134	99.1	72.4	58.0	42.3
1.70V	510	381	340	301	250	216	165	133	98.7	72.1	57.7	42.0
1.75V	472	364	319	287	238	210	159	132	98.2	71.7	57.3	41.7
1.80V	423	330	293	264	225	199	154	126	96.0	70.3	56.4	41.2
1.85V	374	287	261	238	204	183	142	119	91.7	67.7	54.6	40.2

UPS123607

Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

FV/Time	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	62.8	41.5	35.5	30.8	24.5	20.5	14.9	11.9	8.71	6.32	5.04	3.61
1.67V	55.7	39.2	34.0	29.7	24.0	20.2	14.8	11.8	8.66	6.29	5.02	3.60
1.70V	52.2	38.1	32.9	29.0	23.5	19.9	14.6	11.7	8.63	6.26	4.98	3.57
1.75V	47.1	35.0	30.7	27.2	22.4	19.1	14.3	11.5	8.50	6.20	4.95	3.56
1.80V	42.0	31.5	27.9	24.8	20.7	17.9	13.6	11.1	8.30	6.07	4.86	3.51
1.85V	36.6	27.2	24.2	21.9	18.5	16.3	12.6	10.4	7.83	5.77	4.64	3.36

Constant Power Discharge Characteristics Unit: W (25°C, 77°F)

FV/Time	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	550	405	360	322	268	228	170	137	100	73.2	58.6	43.0
1.67V	522	390	352	315	263	225	169	136	99.7	72.9	58.4	42.5
1.70V	499	383	344	309	258	222	167	134	98.4	72.4	58.2	42.2
1.75V	462	365	326	295	249	214	164	132	96.8	71.6	57.8	41.9
1.80V	428	339	301	274	232	203	156	128	95.2	70.0	56.3	41.4
1.85V	374	298	272	248	211	186	144	120	91.6	67.4	54.2	39.8

UPS12460

Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

FV/Time	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	77.2	52.7	44.9	39.7	32.3	27.3	19.9	15.9	11.6	8.37	6.65	4.80
1.67V	69.5	50.0	43.4	38.7	31.7	26.9	19.7	15.7	11.5	8.33	6.63	4.78
1.70V	66.0	48.6	42.4	37.9	31.1	26.5	19.6	15.6	11.4	8.29	6.60	4.75
1.75V	60.5	45.1	39.9	35.6	29.8	25.4	19.0	15.3	11.3	8.19	6.52	4.72
1.80V	53.8	41.1	36.5	33.0	27.8	24.0	18.2	14.7	11.0	7.98	6.38	4.62
1.85V	46.3	36.0	32.1	29.4	24.9	21.8	16.8	13.8	10.4	7.63	6.12	4.43

Constant Power Discharge Characteristics Unit: W (25°C, 77°F)

FV/Time	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	710	520	460	412	343	296	224	180	133	96.8	77.3	56.4
1.67V	673	500	444	400	338	291	221	178	132	96.3	77.0	56.2
1.70V	650	489	435	394	334	288	220	177	131	96.1	76.7	56.0
1.75V	605	462	414	378	321	280	215	175	130	95.4	76.4	55.7
1.80V	555	429	387	356	303	266	207	168	128	93.6	75.1	54.7
1.85V	486	387	355	324	276	244	189	158	122	89.6	72.2	52.8

UPS12580

Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

FV/Time	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	95.1	63.4	54.1	47.2	38.5	32.3	23.0	18.3	13.2	9.42	7.42	5.31
1.67V	85.3	60.2	51.7	45.6	37.6	31.7	22.7	18.1	13.0	9.30	7.33	5.20
1.70V	81.1	58.4	50.4	44.6	37.1	31.3	22.7	18.0	12.9	9.20	7.24	5.17
1.75V	73.6	53.7	47.2	42.2	35.6	30.1	22.1	17.5	12.7	9.05	7.11	5.03
1.80V	66.1	48.8	43.2	39.3	33.2	28.4	21.1	16.9	12.4	8.82	6.92	4.91
1.85V	59.4	43.5	39.3	36.3	30.3	26.1	19.6	15.8	11.7	8.38	6.61	4.70

Constant Power Discharge Characteristics Unit: W (25°C, 77°F)

FV/Time	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	908	663	580	516	427	361	262	208	150	108	84.2	59.3
1.67V	877	643	565	504	420	356	261	206	149	107	84.0	58.9
1.70V	859	630	556	499	414	353	258	205	149	106	83.6	58.8
1.75V	808	601	538	481	402	343	254	203	148	105	83.1	58.4
1.80V	750	568	505	458	383	329	245	197	145	104	81.7	57.6
1.85V	674	514	463	424	352	305	229	186	138	99.5	78.9	55.6

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UPS series

UPS-series batteries use the latest wafer-thin plate technology to provide optimum high-rate (5-min) performance, which is the next generation of high-rate uninterruptible power source. With new VRLA technology, they are small, lightweight and offer a service life of up to 5 years in standby service life. Because of its innovative design, UPS-series batteries feature 20% greater power density in the standard footprint. As with all our ISO/UL certified batteries, UPS series batteries are rechargeable, highly efficient, maintenance free, leakproof and viable in any orientation.



In accordance with IEC 61056-1/2:2012
In accordance with BS6290-4

Features and Benefits :

- Extreme energy density, small footprint and increased power up to 20% above standard high-rate batteries
- Innovative plate structure greatly increases energy/density ratios
- Superior patented lead plate formula for greater conductivity
- Cost-effective power density in a smaller footprint
- Reduced internal resistance for superior performance
- Superior high-rate discharge capability
- Proprietary electrolyte additives
- Highly durable safety valve
- Viable in any orientation
- Low self-discharge
- No-spill design
- Maintenance free

Service Life :

- Up to 5 years of service life in floating charge condition at 25°C (77°F)

Reliability :

- Our batteries are 100% 2-cycle tested by computer charge and discharge System (CCDS).
- Our batteries are UL-recognized components under UL 1989. (File Number with MH 14533)
- ISO 9001/14001/18001 certified.

Applications :

Standby use

- Telemeters
- UPS power supply
- Workstation UPS
- Emergency lighting equipment
- Precision instrumentation backup power
- Fire alarms and security systems
- Communications and electrical equipment
- Office computers, microcomputers and OA Equipment
- Robots, control equipment and other FA equipment
- Emergency power supply in power plants and substations

Solar Cell Power Generation

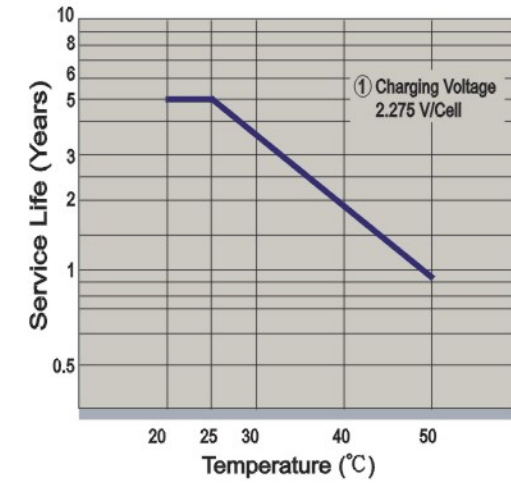
- Street lighting
- Portable power supply
- Water pumping
- Rural power systems

Specifications

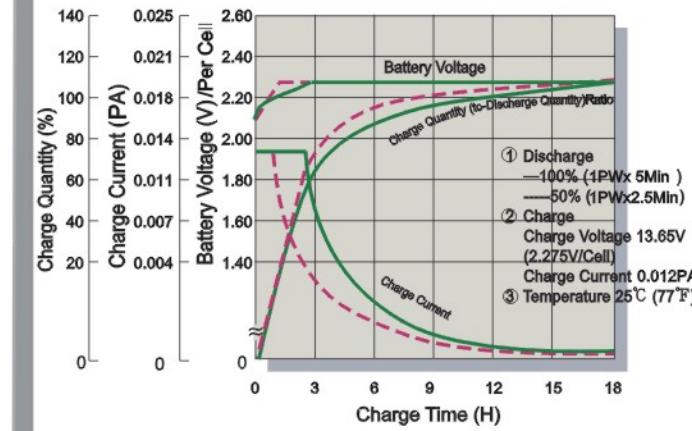
Battery Type	Nominal Voltage (V)	Nominal Capacity (W/PCS)	Weight (Approx. Kg)	Internal Resistance (Approx. mΩ)	Short Circuit Current (A)	Max. Discharge Current 5 sec(A)	Dimensions (mm)				Terminal Type	Bolt	Max. Charge Current(A)	Max. Screw Torque Value	
							Overall Height (H)	Container Height (h)	Length(L)	Width (W)				Kgf-cm	N-m
UPS122406	12	240	1.46	33.50	230	100/130	98.6±1.0	94.3±1.0	190.9±2.0	51.0±1.0	F1F2	Faston Tab 187/250	2.0	--	--
UPS123606	12	360	1.97	20.70	325	100/130	98.6±1.0	94.3±1.0	190.9±2.0	51.0±1.0	F1F2	Faston Tab 187/250	3.0	--	--
UPS123607	12	360	2.00	20.90	325	100/130	98.6±1.0	94.3±1.0	190.9±2.0	64.8±1.0	F1F2	Faston Tab 187/250	3.0	--	--
UPS12450	12	400	2.50	16.60	450	130	98.6±1.0	94.3±1.0	190.9±2.0	64.8±1.0	F2	Faston Tab 187/250	3.8	--	--
UPS12680	12	580	2.83	11.80	575	130	98.6±1.0	94.3±1.0	190.9±2.0	64.8±1.0	F2	Faston Tab 187/250	4.8	--	--

* Nominal Capacity 5 min-rate to 9.6V per PCS @25°C (77°F)
• Float Charge: 2.275±0.025 V/Cell at 25°C (77°F); Temp. Coefficient: -3.3mV/°C

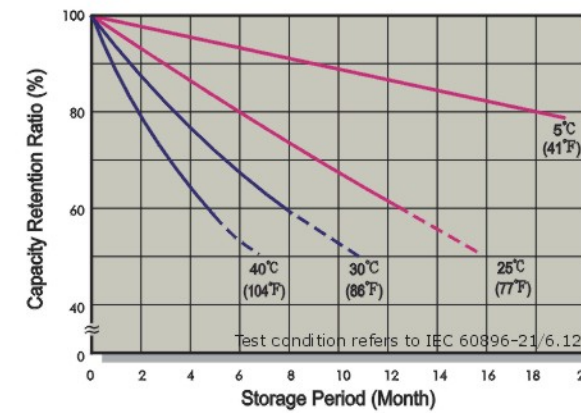
Expected Life vs. Operating Temperature



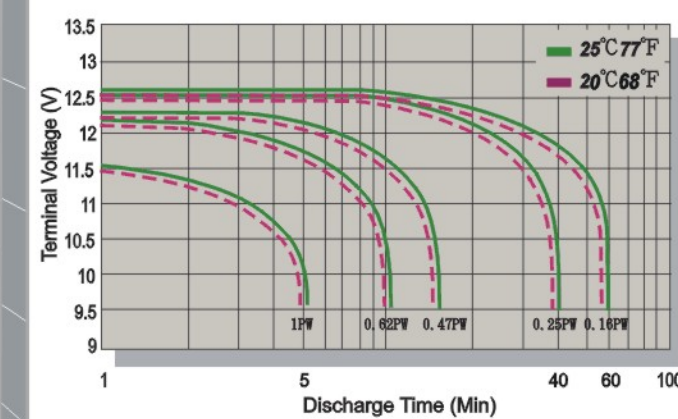
Battery Voltage and Charge Time for Standby Use



Capacity Retention Characteristic

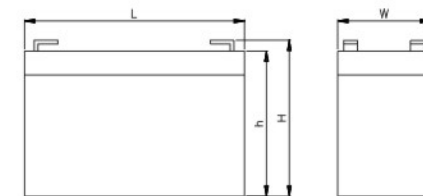


Discharge Characteristics

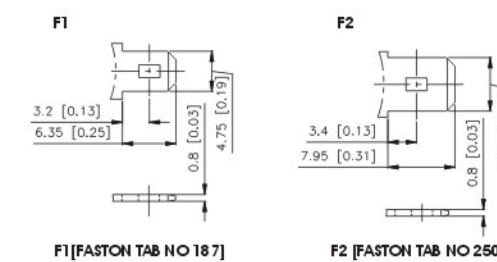


• The above diagrams are typical. For more detailed information please see the specific product sheets.
• P is the capacity of 5 minute-rate while the final voltage is 9.00V per battery.
For example, 1PW discharge power of UPS123607 is: 1 x 360 = 360 (W/battery)
For example, 0.05PA charge current of UPS123607 is: 0.05 x 3600 = 3.0 (A)

Battery Profile



Terminal Type



UPS122406

F.V/Time	Constant Current Discharge Characteristics Unit: A (25°C, 77°F)											
	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	42.4	27.2	23.6	20.6	16.1	13.5	9.89	7.93	5.80	4.21	3.35	2.41
1.67V	37.4	26.0	22.7	20.0	15.9	13.3	9.77	7.88	5.77	4.19	3.34	2.40
1.70V	35.2	25.2	22.0	19.7	15.6	13.2	9.67	7.86	5.75	4.16	3.31	2.38
1.75V	31.4	23.5	20.8	18.5	14.9	12.8	9.57	7.73	5.69	4.12	3.28	2.36
1.80V	27.7	21.3	19.1	16.9	14.0	12.1	9.22	7.48	5.55	4.04	3.22	2.32
1.85V	24.0	19.0	16.7	15.0	12.6	11.0	8.53	6.96	5.28	3.85	3.08	2.23

F.V/Time	Constant Power Discharge Characteristics Unit: W (25°C, 77°F)											
	2MIN	4MIN	5MIN	6MIN	8MIN	10MIN	15MIN	20MIN	30MIN	45MIN	60MIN	90MIN
1.60V	383	275	240	213	177	151	112	90.1	66.1	48.2	38.5	28.1
1.67V	362	264	233	208	174	149	111	89.7	65.7	48.0	38.4	28.0
1.70V	350	258	228	205	171	148	110	89.4	65.6	47.9	38.3	27.9
1.75V	324	243	217	196	166	144	109	88.1	65.1	47.6	38.1	27.8
1.80V	296	226	201	184	156	136	105	85.5	63.7	46.7	37.5	27.4
1.85V	258	203	184	170	143	127	97.8	79.7	61.3	45.0	36.1	26.4

