THE ENERGY DOCTOR®
TED
BATTERY EXPERTS

Data sheet
Valve-Regulated Lead-Acid battery
AGM TED1223
12V 23Ah

Physical Specifications



Part Number: AGM High Rate TED1223
Length: 181 ± 2 mm (7.13 inches)
Width: 77 ± 2 mm (3.03 inches)
Weight: 5.5kg (11.02lbs)
Height: 167.5 ± 2 mm (6.59 inches)

Standard case material is flame retardant to (UL94) HBO.
The TED Batteries range provide an extremely reliable and versatile valve regulated lead acid battery. Their unique construction and sealing techniques ensures that no electrolyte leakage can occur, and provides safe and effective operation in any orientation, and meets all requirements of the International Air Transport Association Dangerous Goods Regulations to allow transportation by air.

Specifications

Terminal Type: Standard F3/T3 or any suitable terminal (at costumer request)

Design Floating Life 20ºC (68ºF): 8 Years

Maxim Discharge Current: 340A/5sec.

Internal Resistance Approximative: 10mΩ

Cycle Use: Initial Charging Current Less Than 6.1A • Voltage 14.4÷14.8 at 25ºC (77ºF) • Temperature Coefficient -30mV/ºC
Standby Use: No Limit on Initial Charging Current Voltage 13.5÷13.8V at 25ºC (77ºF) • Temperature Coefficient -20mV/ºC
Capacity Affected by Temperature 40ºC (104ºF) 103% 25ºC (77ºF) 100% 0ºC (32ºF) 86%

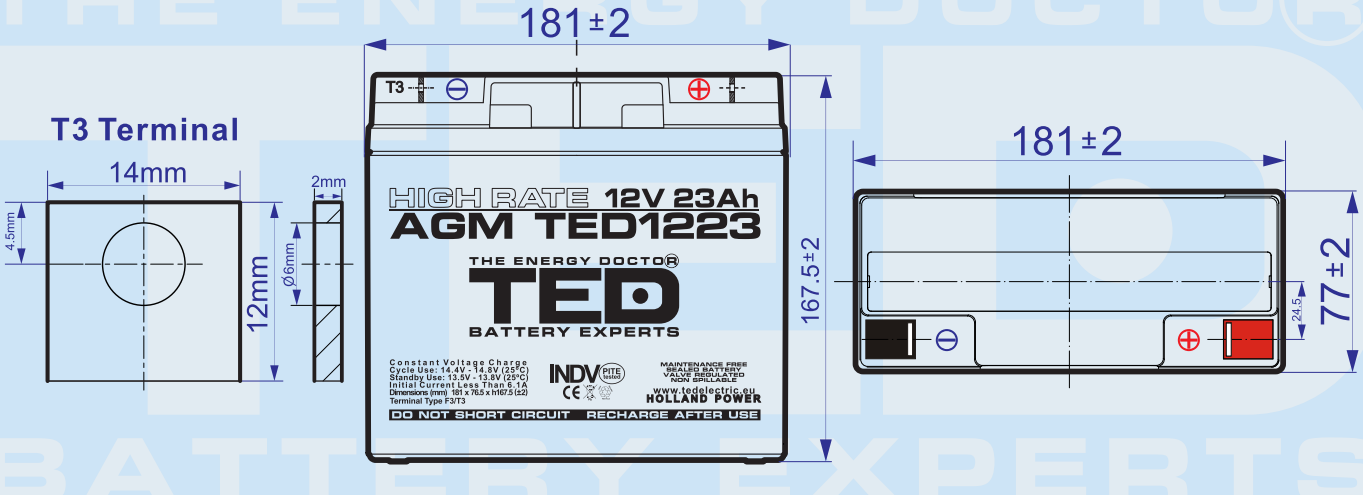
Self Discharge: TED Batteries may be stored for up to 6 months at 25ºC (77ºF) and than refresh charge is required. For higher temperatures the time interval will be shorter.

Rated Capacity

23.0 Ah/2.3 A	20hr	1.80V/cell 25ºC/77ºF
22.0 Ah/2.80 A	10hr	1.80V/cell 25ºC/77ºF
20.0 Ah/4.05 A	5hr	1.75V/cell 25ºC/77ºF
17.8 Ah/5.95 A	3hr	1.75V/cell 25ºC/77ºF
14.9 Ah/14.88 A	1hr	1.60V/cell 25ºC/77ºF

Discharge Characteristics

Operating Temperature Range
Charge: 0ºC÷40ºC (5ºF÷104ºF)
Storage: -15ºC÷40ºC (5ºF÷104ºF)
Nominal: 25ºC±3ºC (77ºF±5ºF)
Discharge: -15ºC÷50ºC (5ºF÷122ºF)



Due to continuous product improvements, program specifications are subject to change without notice

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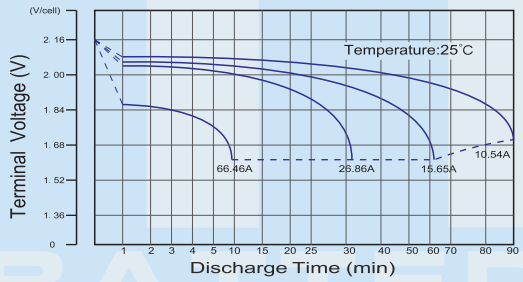
Constant Current Discharge (Amperes) at 25ºC

F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	99.10	86.17	71.64	63.21	49.86	40.36	29.55	17.23	12.56
1.67V	91.70	79.74	67.21	59.31	47.26	37.65	28.17	16.42	11.96
1.70V	87.88	76.42	64.84	57.16	45.81	36.21	27.37	15.95	11.60
1.75V	83.01	72.18	61.60	53.68	43.66	35.22	26.60	15.69	11.34
1.80V	78.07	67.89	58.36	50.17	41.47	34.18	25.79	15.38	11.06
1.85V	72.86	63.36	54.87	46.51	39.11	32.98	24.83	15.01	10.73

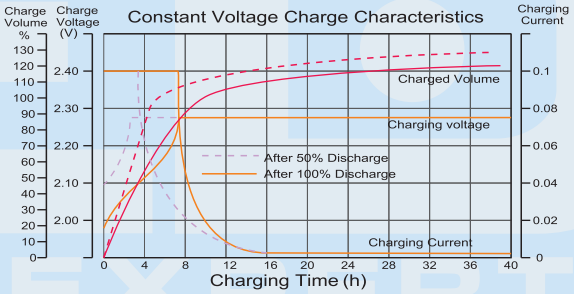
Constant Power Discharge (Watts) at 25ºC

F.V/Time	3MIN	5MIN	8MIN	10MIN	15MIN	20MIN	30MIN	60MIN	90MIN
1.60V	179	156	132	117	92.7	74.2	54.4	31.9	23.3
1.67V	168	146	125	111	88.8	69.9	52.4	30.7	22.4
1.70V	163	141	122	108	87.0	68.0	51.5	30.1	22.0
1.75V	156	135	117	103	84.0	67.0	50.7	30.0	21.8
1.80V	148	129	113	97.4	81.0	65.9	49.9	29.8	21.6
1.85V	141	123	108	92.1	77.9	64.9	49.0	29.7	21.3

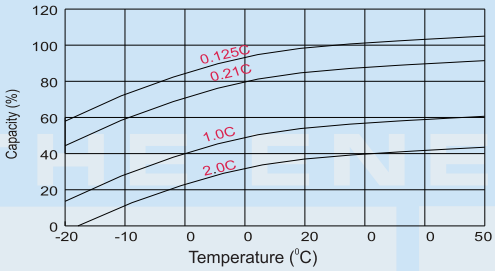
Discharge Characteristics



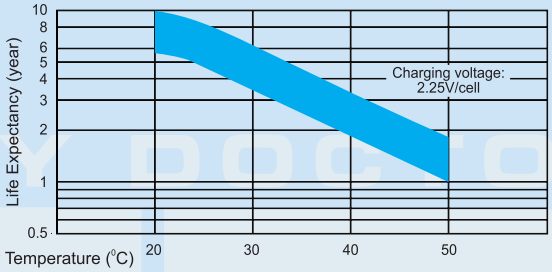
Float Charging Characteristics



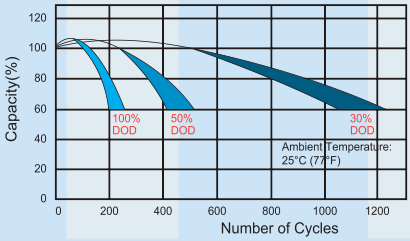
Temperature Effects in Relation to Battery Capacity



Effect of Temperature on Long Term Float Life

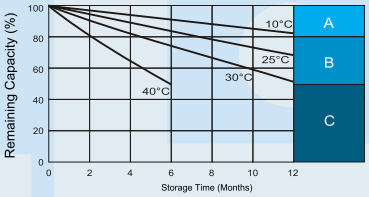


Cycle Life in Relation to Depth of Discharge



Testing condition
Discharging:current 0.17C (FV 1.7V/cell);
Charging:current 0.25C max, voltage 2.45V/cell;
Charging volume:125% of discharged capacity.

Self Discharge Characteristics



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 as below:
1. Charged for above 3 days at limited current 0.25CA and constant voltage 2.25V/cell.
2. Charged for above 20 hours at limited current 0.25CA and constant voltage 2.45V/cell.
3. Charged for 8~10 hours at limited current 0.05CA.

C — Supplementary charge may often fail to recover the capacity.
The battery should never be left standing till this is reached.

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