

TS12-50W

12V8.5Ah(20hr)

High Rate Discharge

The ABT Thunder TS...W VRLA are batteries according to Eurobat Classification and specially designed for applications which need high power backup.

Thunder TS...W is the premium plus VRLA battery for UPS and diesel start application.

Mechanical Characteristics

	SI Unit	English Unit
Length	151mm	5.94inch
Width	65mm	2.56inch
Height	94mm	3.70inch
Total Height	100mm	3.94inch

Approx. Weight 2.55Kg 5. 62lb

Type of material for Box and lids :
ABS Standard (FV0 Optional)

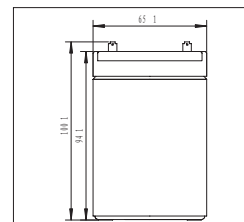
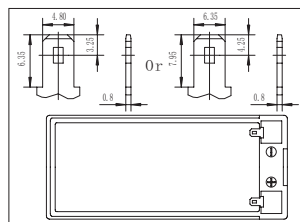
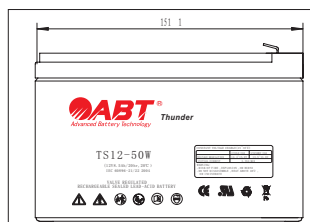
Product Characteristics

- Positive and negative grids in lead-calcium tin alloy
- Superior energy density
- More than 40% power output than ABT standard SC series
- Operates at a low internal pressure
- Usable in any orientation
- A recognized component of UL
- Range 12V monobloc from 46W to 50W per cell for 10' @ 1.60Vpc
- Six months shelf life at 20°C
- 5 yrsrs design life

Performance Characteristics

Nominal Voltage	12V
Number of cell	6
Nominal Capacity 20°C (68°F)	10 min wattage @1.60V50W/cell 1 hour rate (6.04A, 1.60V Per cell)6.04Ah 10 hour rate (0.789A, 1.75V Per cell)7.89Ah 20 hour rate (0.425A, 1.75V Per cell)8.5Ah
Internal Resistance	Fully Charged battery 20°C(68°F) 18mOhms
Mass Energy(Wh/kg)	40.00
Volumic energy(Wh/L)	110.56
Self-Discharge	3% of capacity declined per month at 20°C(average)
Operating Temperature Range	Discharge -20~60°C Charge -10~60°C Storage -20~60°C
Max. Discharge Current	127.5A (5s)
Short circuit current	694A
Charge Methods:	Constant Voltage Charge 20°C(68°F) Cycle use 14.4-15.0V/unit Temperature compensation -30mV/°C/unit Standby use 13.5-13.8V/unit Temperature compensation -20mV/°C/unit Maximum charging current 2.55A

Dimensions / Terminal



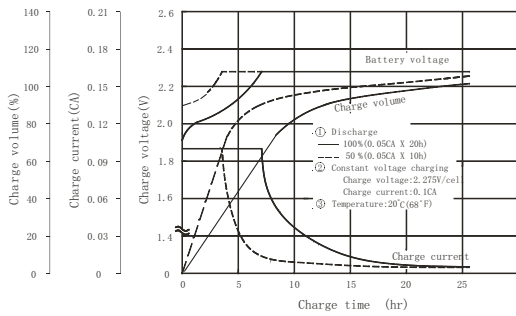
Constant Current Discharge Data (Amperes at 20°C / 68°F)

End Volt. Per Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	1h	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60V	33.77	22.26	16.79	13.65	11.69	10.39	9.33	8.45	7.67	6.92	6.04	4.420	3.500	2.930	2.500	2.000	1.620	1.400	1.230	1.110	0.991	0.871	0.747	0.399
1.65V	31.64	21.00	16.04	13.16	11.23	10.00	9.00	8.11	7.41	6.64	5.78	4.263	3.395	2.860	2.413	1.940	1.563	1.349	1.186	1.072	0.958	0.841	0.725	0.383
1.70V	29.81	19.77	15.36	12.70	10.77	9.64	8.60	7.80	7.16	6.37	5.54	4.114	3.293	2.767	2.340	1.885	1.511	1.303	1.148	1.031	0.929	0.815	0.698	0.370
1.75V	27.97	18.85	14.78	12.21	10.34	9.24	8.26	7.44	6.86	6.12	5.33	3.950	3.185	2.682	2.267	1.826	1.461	1.256	1.107	1.000	0.900	0.789	0.671	0.359
1.80V	26.50	17.99	14.14	11.63	9.95	8.94	7.96	7.22	6.64	5.94	5.08	3.819	3.088	2.600	2.203	1.771	1.408	1.221	1.069	0.967	0.874	0.765	0.651	0.346

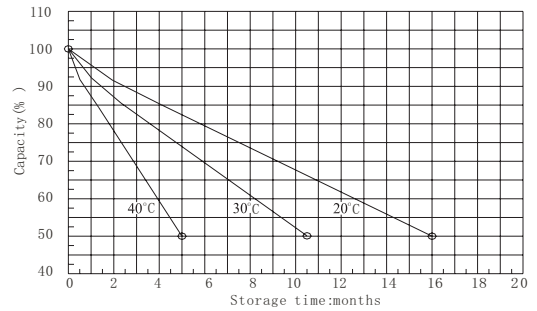
Constant Power Discharge Data (Watts per cell at 20°C / 68°F)

End Volt. Per Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	1h	1.5h	2h	2.5h	3h	4h	5h	6h	7h	8h	9h	10h	12h	24h
1.60V	81.60	50.00	37.10	30.10	25.10	21.80	19.40	17.35	15.92	14.80	12.76	9.180	7.350	6.120	5.200	4.080	3.408	2.918	2.551	2.296	2.092	1.900	1.633	0.898
1.65V	78.00	48.20	35.60	29.20	24.30	21.20	18.80	16.81	15.44	14.36	12.41	8.950	7.170	5.970	5.050	3.970	3.323	2.854	2.495	2.245	2.047	1.865	1.600	0.881
1.70V	74.70	46.40	34.40	28.20	23.40	20.40	18.20	16.28	14.95	13.92	12.06	8.690	6.980	5.820	4.920	3.890	3.247	2.790	2.443	2.192	2.009	1.829	1.576	0.862
1.75V	71.10	44.30	33.10	27.10	22.60	19.70	17.50	15.75	14.48	13.51	11.71	8.460	6.780	5.660	4.800	3.780	3.175	2.725	2.386	2.143	1.968	1.794	1.550	0.843
1.80V	67.80	42.50	31.80	26.00	21.70	19.00	16.90	15.21	14.00	13.07	11.36	8.200	6.580	5.510	4.670	3.700	3.091	2.661	2.335	2.099	1.927	1.762	1.522	0.830

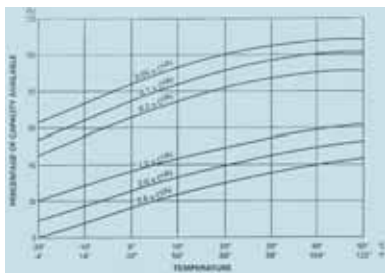
Battery Voltage and Charge Time for Standby Use



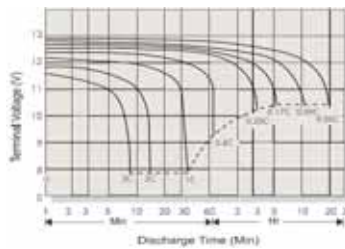
Capacity Retention Characteristic



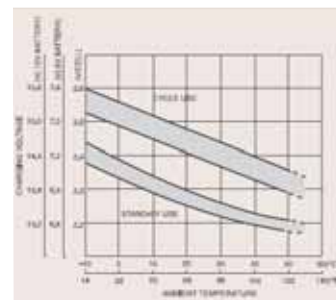
Capacity Vs Temperature



Discharge Curve



Charge Voltage Vs Temperature



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ABT VRLA Battery: Available Power Range From 7Ah to 3000Ah

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