

Complying standards:

IEC60896-21/22 2004,
JIS C8704-1/2 2006,
BS6290-41997,
JIS C8702-1/2 2003,
Eurobat Guide,
IEC 707 Fv0



TFT12-160

12V 590W(10min, 1.60Vpc)
12V 160Ah(10hr, 1.80Vpc)

High Performance

The ABT Enduro TFT VRLA batteries are designed for dual purposes of Telecom and UPS in floating and high rate discharge backup system with proven compliance to the most rigorous international standards.

Enduro TFT is also recognized as long service life and high performance batteries. The Enduro TFT front terminal monoblocs is compact design and standard footprint for 19" and 23" and ETST cabinet.

Mechanical Characteristics

	SI Unit	English Unit
Length	551mm	21.69inch
Width	110mm	4.33inch
Height	320mm	12.60inch
Total Height	320mm	12.60inch
Approx. Weight	51.2Kg	112.88lbs
Type of material for Box and lids : ABS Standard (FV0 Optional)		

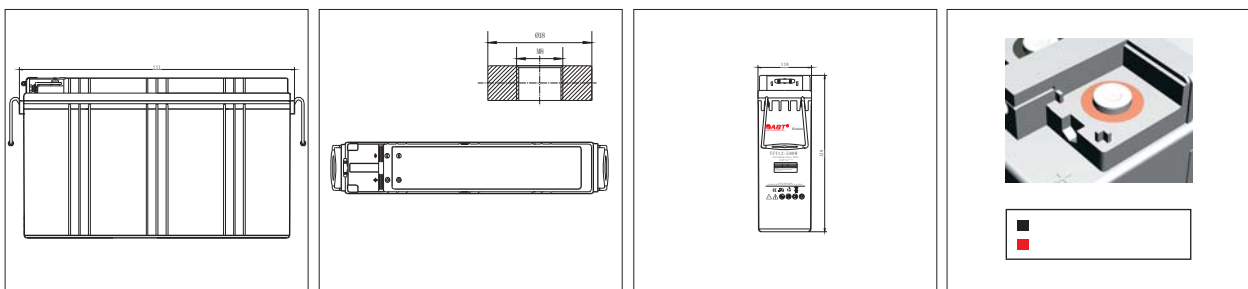
Product Characters

- Pb-Ca-Sn alloy grids designed to resist corrosion and prolong life
- Low resistance microporous glass fibre separator
- Centralized venting system for gas ventilation
- Flame arrestor to improve safety
- Rope handles for easy installation
- Pillar with brass insert where screwed an copper connector fitted with a bolt and stainless nut and washers.
- Design life 10 years
- Low Self Discharge
- U. L. Component Recognition

Electrical Characteristics

Nominal Voltage	12V
Number of Cell	6
Capacity	
Nominal Power 20°C (68°F)	10 min rate (1.60Vpc) 590W/cell
Nominal Capacity 20°C (68°F)	20 hour rate (8.4A, 1.80Vpc)168Ah 10 hour rate (16A, 1.80Vpc)160Ah 1 hour rate (106.1A,1.60Vpc) 106.1Ah
Intensity	
Max. Discharge Current	20°C (68°F) 700A(5s)
Short circuit current	3200A
Maximum charge current	32A(20% of rated capacity)
Internal Resistance	Fully Charged battery 20°C (68°F)3.89mOhms
Mass Energy(Wh/kg)	37.5
Volumic Energy(Wh/L)	98.99
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
Charge Methods:	Constant Voltage Charge 20°C (68°F) Cycle use 14.4-14.7V Temperature compensation -24mV/°C Standby use 13.50-13.74V Temperature compensation -20mV/°C
Terminal Type	Inserted Thread and bolt M8X φ 18
Torque strength in Nm	12~16
Handle Type	Rope

Dimensions / Terminal



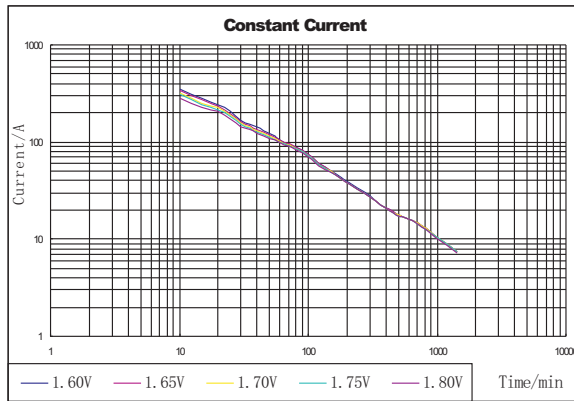
Constant Current Discharge Data (Amperes at 20°C / 68°F)

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	509	350.0	282.8	244.4	206.0	167.6	154.8	141.9	131.8	122.8	106.1	83.2	60.2	50.9	42.6	33.4	27.5	22.8	20.3	18.9	17.2	16.1	13.7	7.44
1.65V	474	336.0	271.1	234.5	198.0	161.5	148.4	135.3	124.9	117.6	104.5	82.1	59.6	50.4	42.0	33.1	27.4	22.8	20.3	18.9	17.2	16.1	13.6	7.44
1.70V	435	320.0	250.4	225.2	191.1	157.0	144.6	132.1	122.2	115.0	102.0	80.3	58.6	49.7	41.7	32.8	27.2	22.6	20.2	18.5	17.1	16.1	13.6	7.38
1.75V	381.5	306.0	241.0	215.3	183.1	150.8	139.4	127.9	118.9	112.1	100.1	79.0	58.0	49.3	41.7	32.8	27.1	22.6	20.0	18.4	17.1	16.0	13.6	7.35
1.80V	343	285.0	230.0	205.3	174.8	144.4	134.1	123.7	115.9	109.7	98.8	78.2	57.7	48.9	41.4	32.5	27.0	22.3	19.9	18.4	16.9	16.0	13.5	7.25

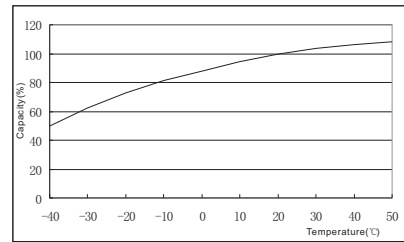
Constant Power Discharge Data (Watts per cell at 20°C / 68°F)

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	828	590.0	490.0	429.3	368.6	307.9	281.1	254.4	235.1	225.6	209.9	148.9	117.4	97.2	83.6	66.6	57.1	48.8	42.3	38.0	34.9	32.5	27.7	14.3
1.65V	795	576.7	477.3	417.8	358.2	298.7	273.8	249.0	231.4	221.1	203.9	145.1	113.9	95.1	82.7	65.7	56.2	47.6	41.6	37.4	34.5	32.3	27.5	14.2
1.70V	757	564.5	464.5	406.8	349.1	291.5	267.2	242.9	225.7	216.7	202.0	143.0	112.1	93.7	81.4	64.8	55.1	46.9	41.0	37.2	34.5	32.1	27.5	14.2
1.75V	686	552.3	451.8	395.3	338.8	282.3	259.9	237.4	222.0	212.3	196.0	139.8	110.5	92.2	80.0	63.8	54.5	46.3	40.4	37.1	34.2	31.9	27.5	14.2
1.80V	634	540.1	437.2	382.5	327.9	273.2	252.0	230.7	216.3	206.6	190.1	137.0	108.7	90.8	78.9	62.9	53.6	45.8	39.9	36.7	34.0	31.7	27.5	14.1

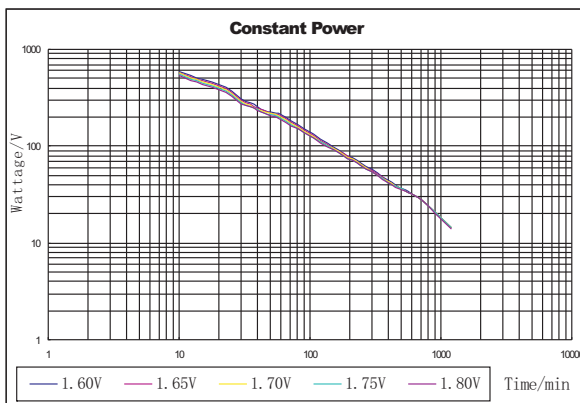
Constant Current Discharge Curve



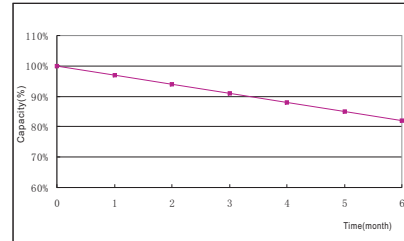
Capacity Vs Temperature



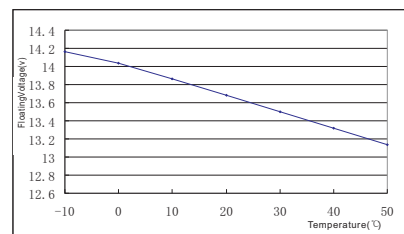
Constant Power Discharge Curve



Self Discharge



Floating Charge Voltage Vs Temperature



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

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