

# ES 9-12

# AGM-VRLA 12V - 9Ah

## INTRODUCTION

The most advanced technology of ROCKET, Valve Regulated Lead Acid batteries make them highly useful in a broad range of applications. The use of high-purity calcium alloy maximizes the longevity of ROCKET batteries to ensure excellent performance in any circumstances.

ES Series are specially designed to provide better cyclic life and are ideally suited for areas prone to frequent power failures.

The unique construction coupled with the use of special sealing epoxies and long sealing paths of ROCKET series ensures that no electrolyte leakage can occur from terminals or cases of any ROCKET Batteries. This feature ensures safe & efficient operation of ROCKET batteries in any position.

## TECHNICAL FEATURES

- ✍ Non-Spillable Sealed Construction
- ✍ Absorbent Glass Mat System (AGM System)
- ✍ ABS (Acrylonitrile Butadiene Styrene) container and cover
- ✍ Gas Recombination
- ✍ Maintenance-Free Operation
- ✍ Low Pressure Venting System
- ✍ Heavy - Duty Grids
- ✍ Low Self-Discharge - Long Shelf Life
- ✍ Wide Operating Temperature Range

## APPLICATIONS

- ✍ UPS
- ✍ Telecom Communication Equipments
- ✍ Fire Alarm & Security Systems
- ✍ Medical Instruments
- ✍ Emergency Lighting
- ✍ Computer Backup

## COMPLAINTS STANDARD

- ✍ JIS
- ✍ IEC 60896 PART 1 & 2
- ✍ BS6290-4,
- ✍ Eurobat Guide - HIGH Performance

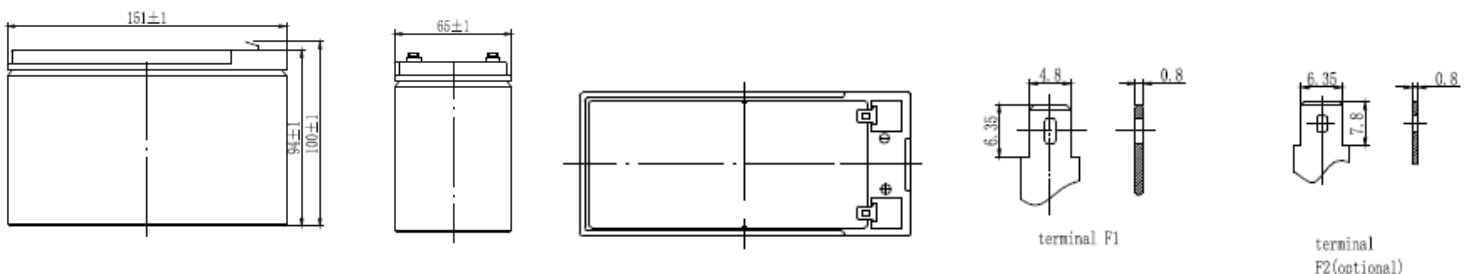
## SPECIFICATION

Nominal Voltage		12V
Capacity (20HR, 25°C)		9Ah
Dimension	Length	151mm (5.94inch)
	Width	65mm (2.56inch)
	Height	94mm (3.70inch)
	Total Height	100mm (3.94inch)
Approx Weight		2.8kg
Design Life		10 Years

## CHARACTERISTICS

Capacity 25°C (77°F)	20 hour rate	9Ah	
	10 hour rate	8.2Ah	
	5 hour rate	7.7Ah	
	1 hour rate	5.8Ah	
Internal resistance (Fully charge, 25°C)		18mΩ	
Self-discharge (20°C)	1 month	Remaining Capacity:3%	
	Operating temperature range	Discharge	-20°C~60°C
		Charge	-10°C~60°C
	Storage	-20°C~60°C	
Maximum discharge current		77°F(25°C) 135A(5 Sec.)	
Short circuit current		450A	
Charge Methods (Constant Voltage Charge 77°F(25°C) - Cyclic Use	Cycle Use 2.30 to 2.35VPC		
	Max. charging Current 3.6A		
	Temp. compensation - 30mV/°C		
Charge Methods (Constant Voltage Charge 77°F(25°C) - Standby Use	Standby Use 2.23-2.27VPC		
	Temp. compensation - 20mV/°C		

**THE BATTERY CONTAINER AND COVER ARE AVAILABLE BOTH IN ABS plastic and Flame Retardant (FR).**



[www.rocketbatteries.net](http://www.rocketbatteries.net)

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## CONSTANT CURRENT DISCHARGE (Amperes) at 25°C

End Point Volts/Cell	5min	10min	15min	30min	60min	3h	5h	10h	20h
1.60V	33.0	24.2	17.0	9.90	5.80	2.33	1.60	0.87	0.47
1.65V	32.1	23.6	16.5	9.79	5.75	2.29	1.56	0.86	0.46
1.70V	30.9	22.9	16.1	9.36	5.71	2.25	1.55	0.84	0.46
1.75V	30.3	22.1	14.6	8.91	5.66	2.20	1.54	0.82	0.45
1.80V	29.6	21.0	13.9	8.45	5.51	2.14	1.53	0.82	0.44

## CONSTANT POWER DISCHARGE (Watts per cell) at 25°C

End Point Volts/Cell	5min	10min	15min	30min	60min	3h	5h	10h	20h
1.60V	71.7	44.8	33.6	19.6	14.5	11.5	6.30	4.34	3.10
1.65V	68.3	44.3	33.1	19.1	14.2	11.2	6.23	4.29	3.04
1.70V	64.8	42.9	31.1	18.5	13.7	11	6.08	4.20	2.98
1.75V	61.4	41.1	30.2	17.6	12.9	10.7	5.94	4.08	2.92
1.80V	58.0	39.2	28.4	16.6	12.2	10.4	5.77	3.92	2.85

