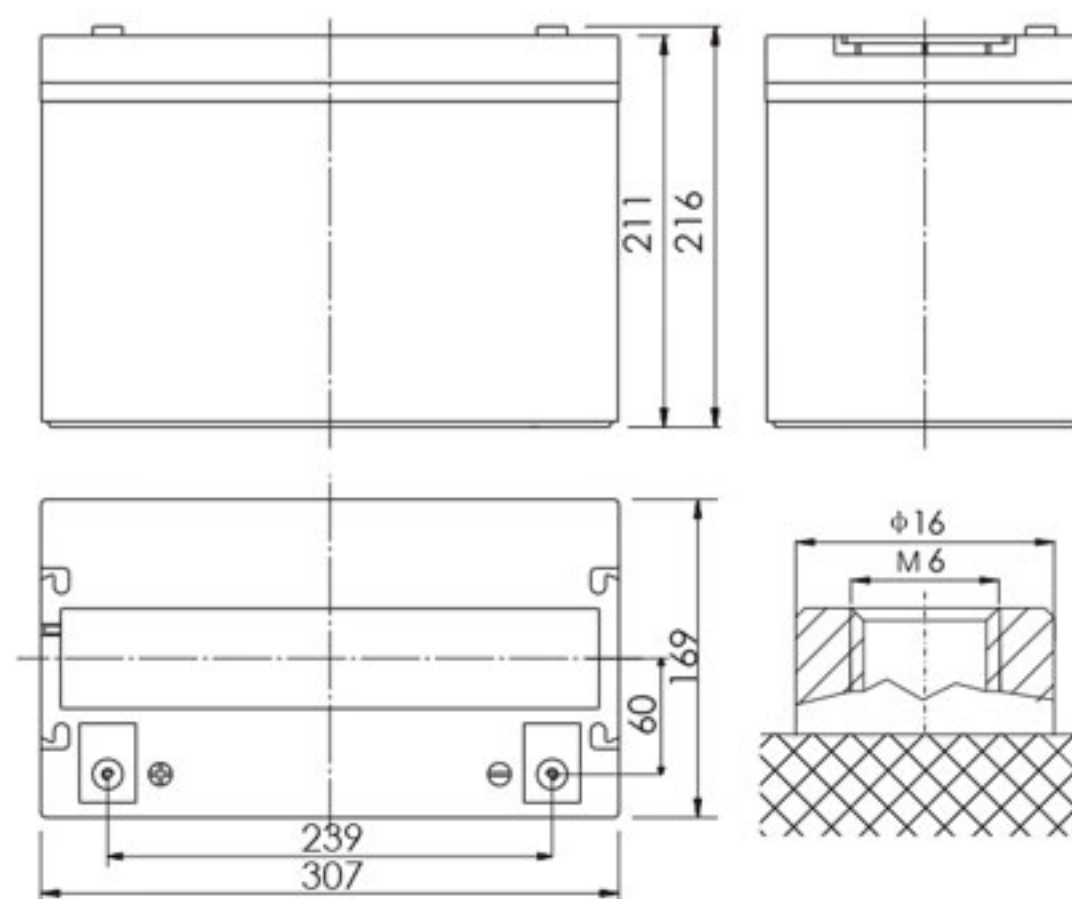


6-FM/NP90

FM/NP Battery Series (General Use Battery)



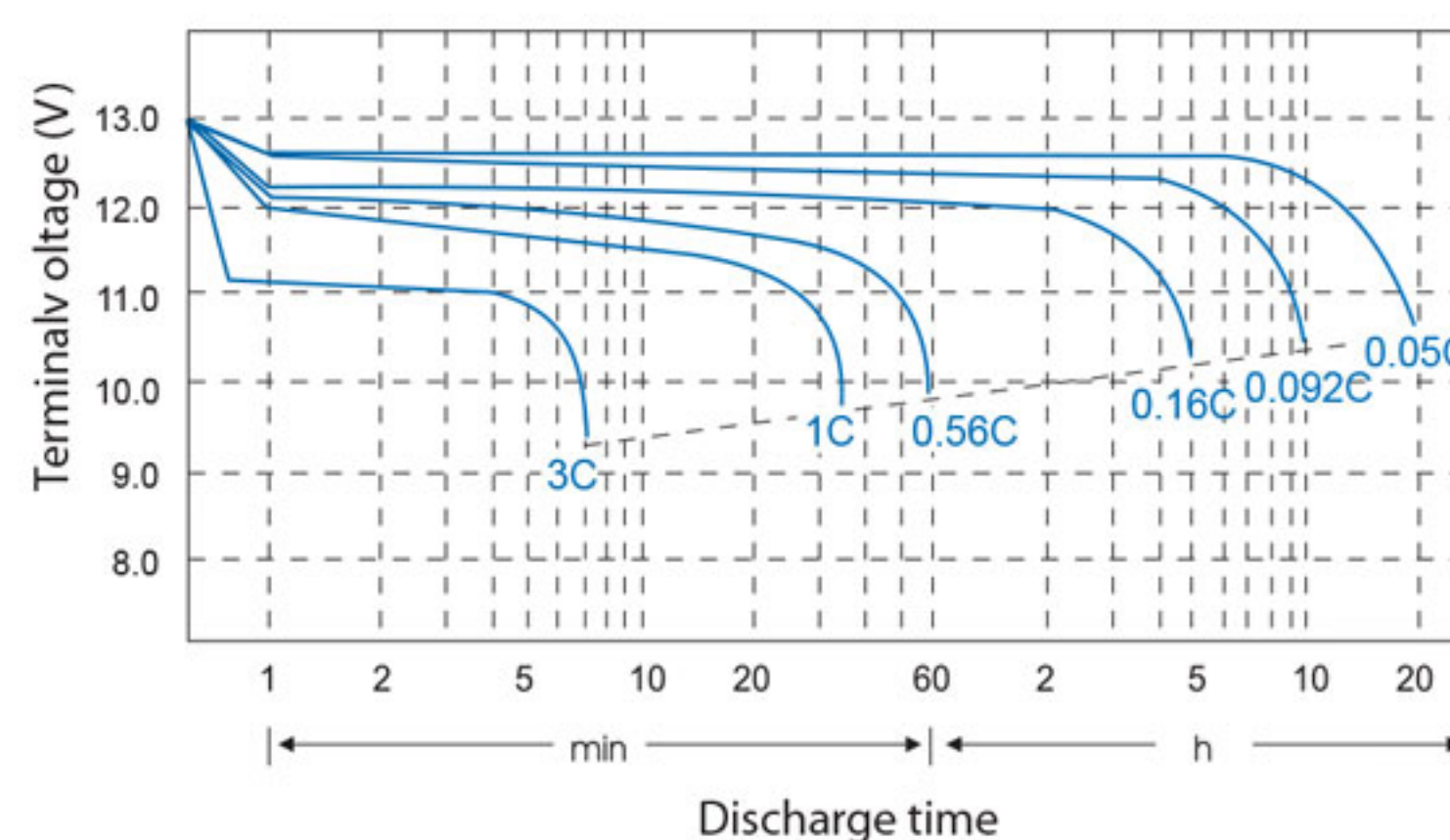
Specifications

Nominal Voltage		12V
Rated Capacity(20 hour rate)		90Ah
Dimensions	Total Height (with terminals)	8.50inches (216mm)
	Height	8.31inches (211mm)
	Length	12.1inches (307mm)
	Width	6.65inches (169mm)
Weight		Approx. 58.52pound(26.6kg)

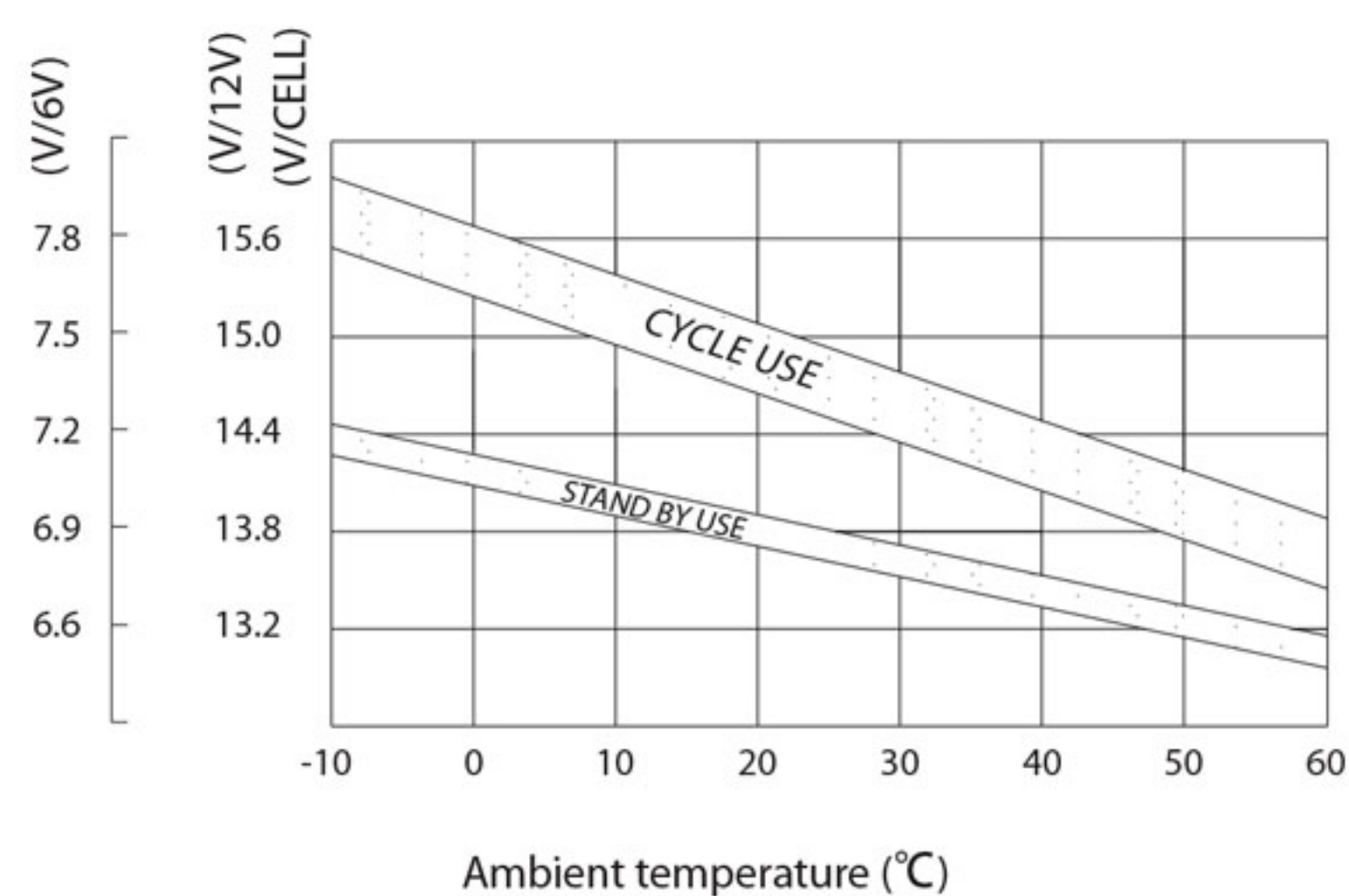
Characteristics

Capacity 77°F(25°C)	20 hourrate (4.50A)	90.0Ah
	10 hourrate (8.28A)	82.8Ah
	5 hourrate (14.4A)	72.0Ah
	1 hourrate (54.0A)	54.0Ah
	15 minute Rate(148A)	37.0Ah
Internal Resistance	Full charged Battery 77°F(25°C)	5mΩ
Capacity affected by Temperature (20 hour rate)	104°F(40°C)	102%
	77°F(25°C)	100%
	32°F(0°C)	85%
	5°F(-15°C)	65%
Self-Discharge 77°F(20°C)	Capacityafter 3 month storage	91%
	Capacityafter 6 month storage	81%
	Capacityafter 12 month storage	60%
Max. Discharge Current 77°F(25°C)	720A(5S)	
Terminal	M2	
Charge (ConstantVoltage)	Cycle	Initial Charging Current less than 27A
		Voltage 14.4~14.7V/77°F(25°C)
	Float	Voltage 13.5~13.8V/77°F(25°C)

Discharge Curves 77°F (25°C)



Relationship between charge voltage and temperature



Constant Current Discharge (AMPERES @25°C)

F.V/Time	10Min	15Min	30Min	45Min	1Hour	2Hour	3Hour	5Hour	8Hour	10Hour	12Hour	24Hour
1.65	195	151	94.0	71.9	48.7	34.2	23.0	15.7	10.6	8.90	7.55	3.92
1.70	185	144	89.4	68.3	48.3	33.1	22.5	15.4	10.3	8.65	7.31	3.84
1.80	155	123	80.5	63.8	46.0	31.7	21.6	14.8	9.93	8.28	7.05	3.77

Constant Power Discharge (WATTS PER CELL@25°C)

F.V/Time	10Min	15Min	30Min	45Min	1Hour	2Hour	3Hour	5Hour	8Hour	10Hour	12Hour	24Hour
1.60	354	275	175	132	109	63.6	44.1	29.1	19.6	16.3	14.1	7.22
1.65	350	273	171	131	107	62.5	43.9	28.9	19.5	16.2	14.0	7.20
1.67	345	272	169	129	107	61.5	43.8	28.8	19.4	16.2	13.9	7.19
1.70	341	267	167	128	107	61.4	43.6	28.7	19.3	16.0	13.8	7.17
1.75	317	252	158	127	106	60.8	43.4	28.6	19.2	15.9	13.7	7.14
1.80	296	236	155	123	103	59.7	42.7	28.3	19.0	15.6	13.5	7.10
1.85	245	206	145	113	96.1	57.5	41.4	26.4	18.0	15.1	13.0	6.88

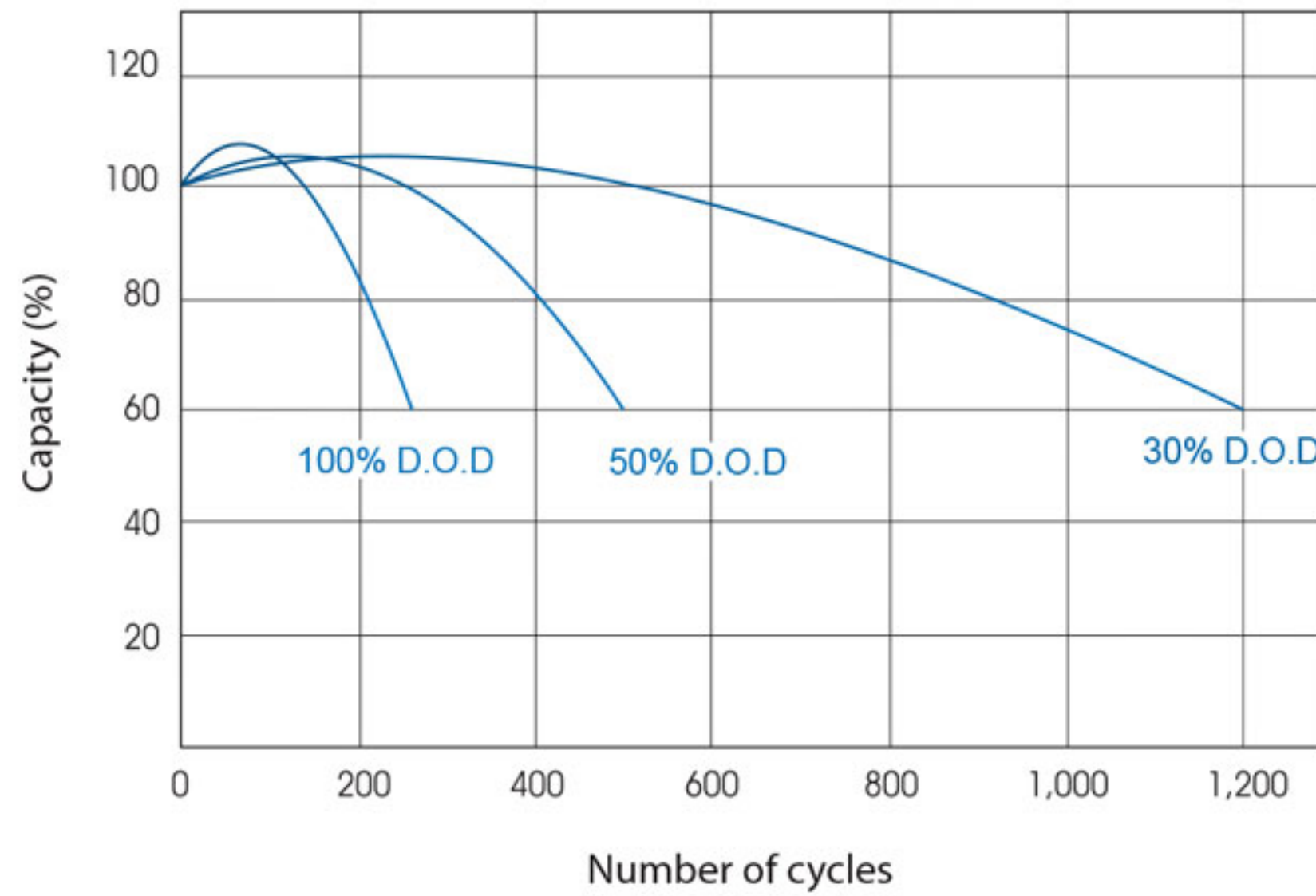
6-FM/NP90

FM/NP Battery Series (General Use Battery)

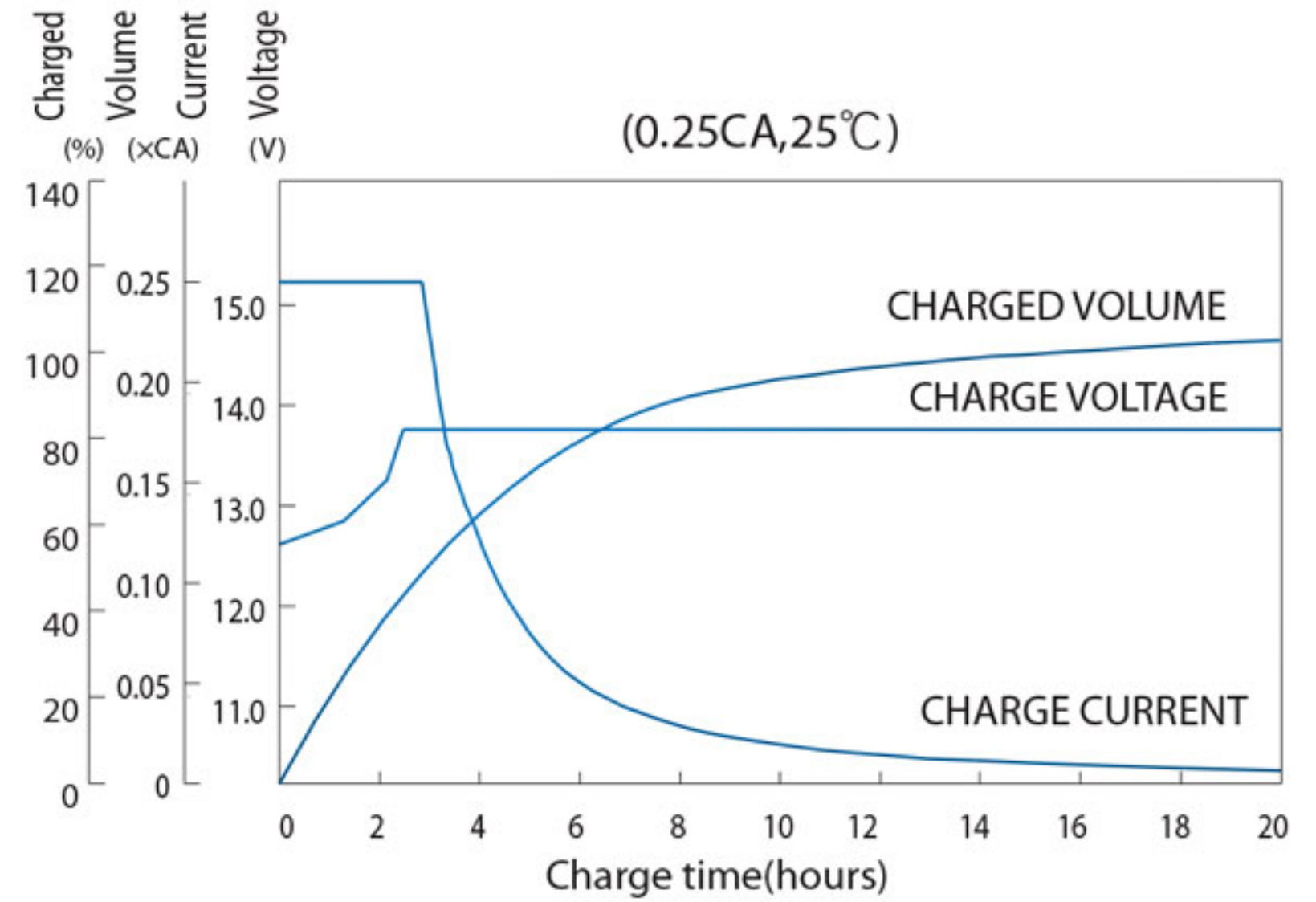
The operating environment temperature above 40°C should be avoided. After long term storage, The battery actual capacity would be less than the rated capacity. Full capacity will be obtained through several charge/discharge cycles.

To get the longest life, Deutsche Power battery should be fully charged before storage

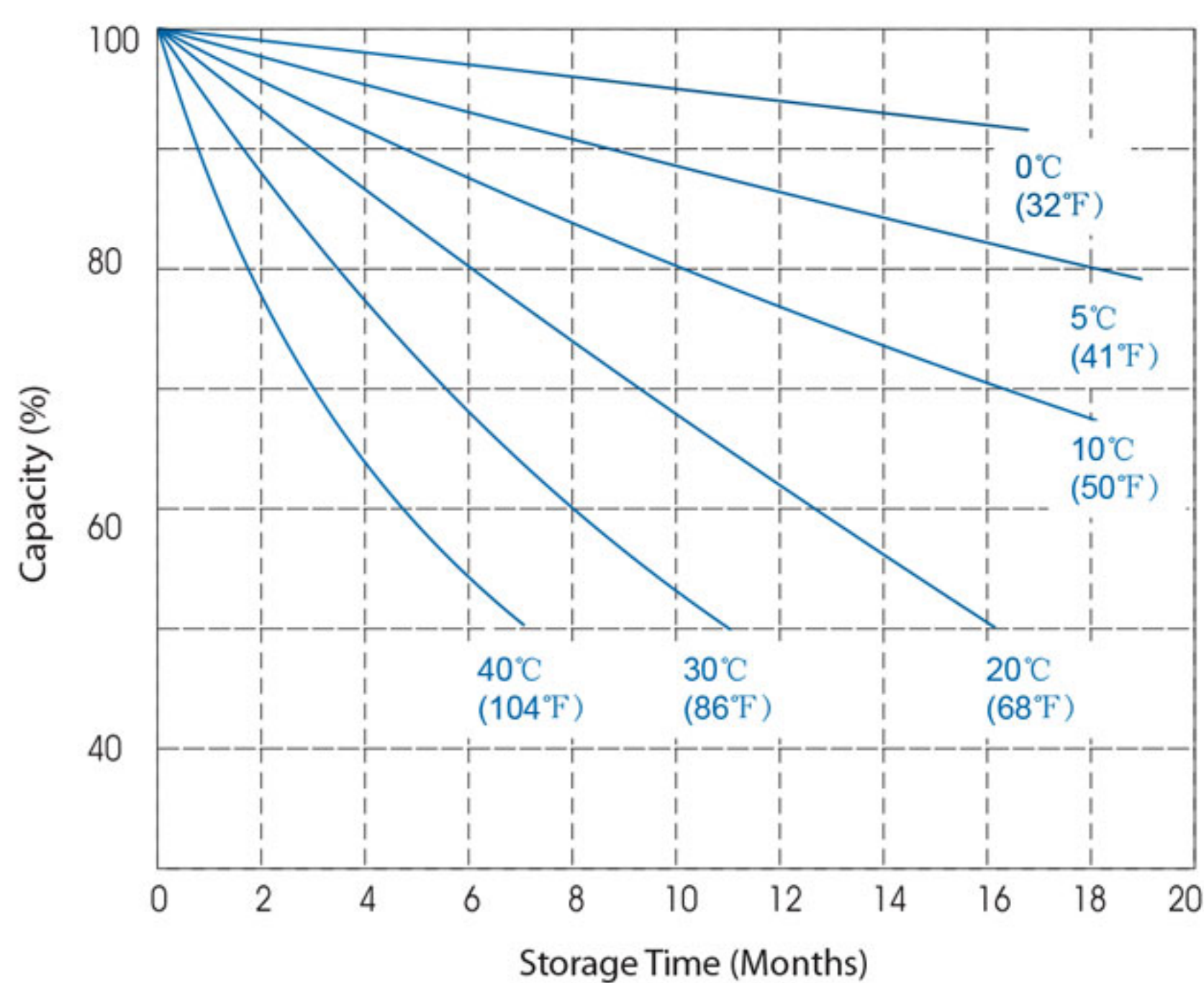
Cycle service life in relation to depth of discharge



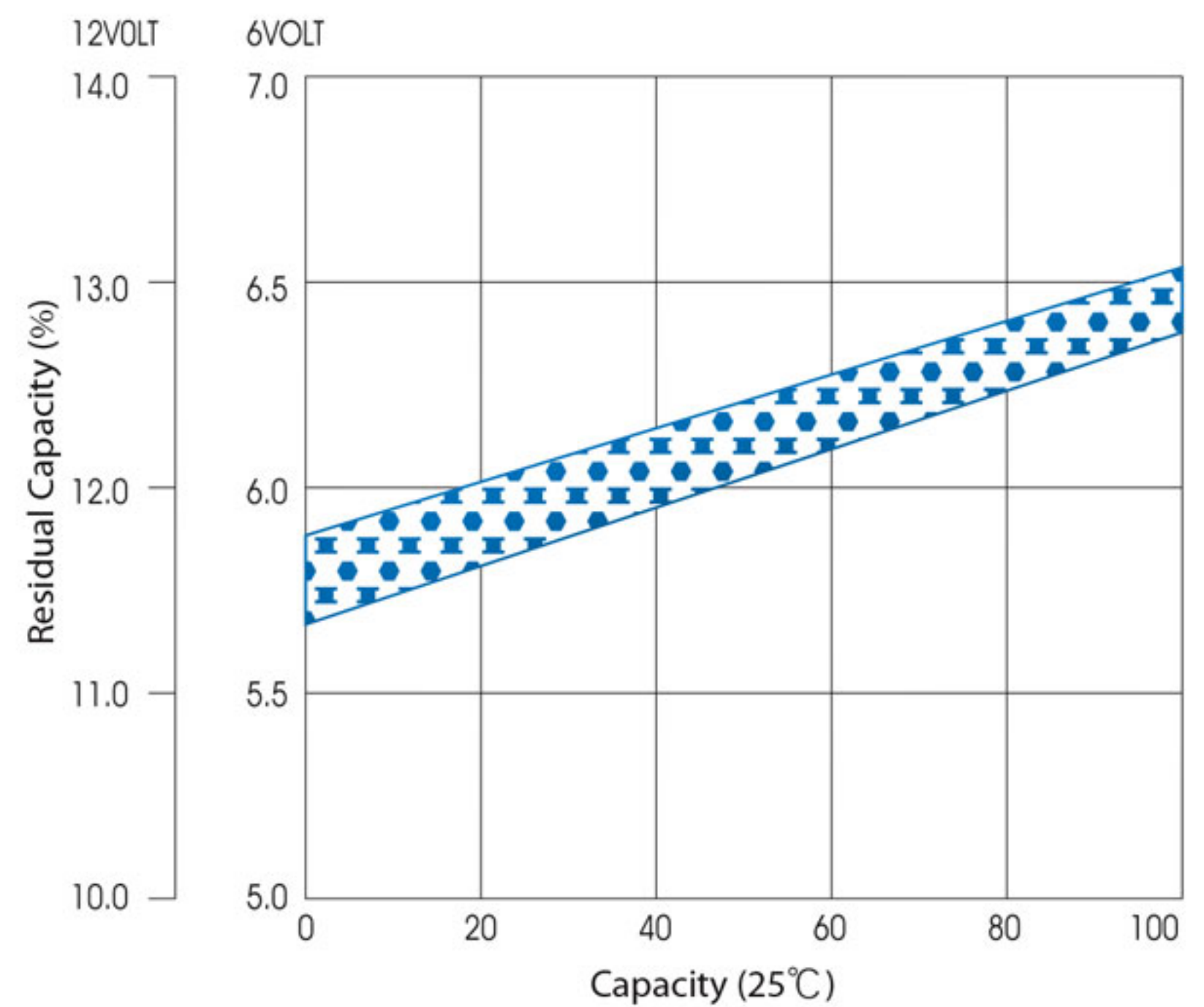
Constant voltage charge characteristic



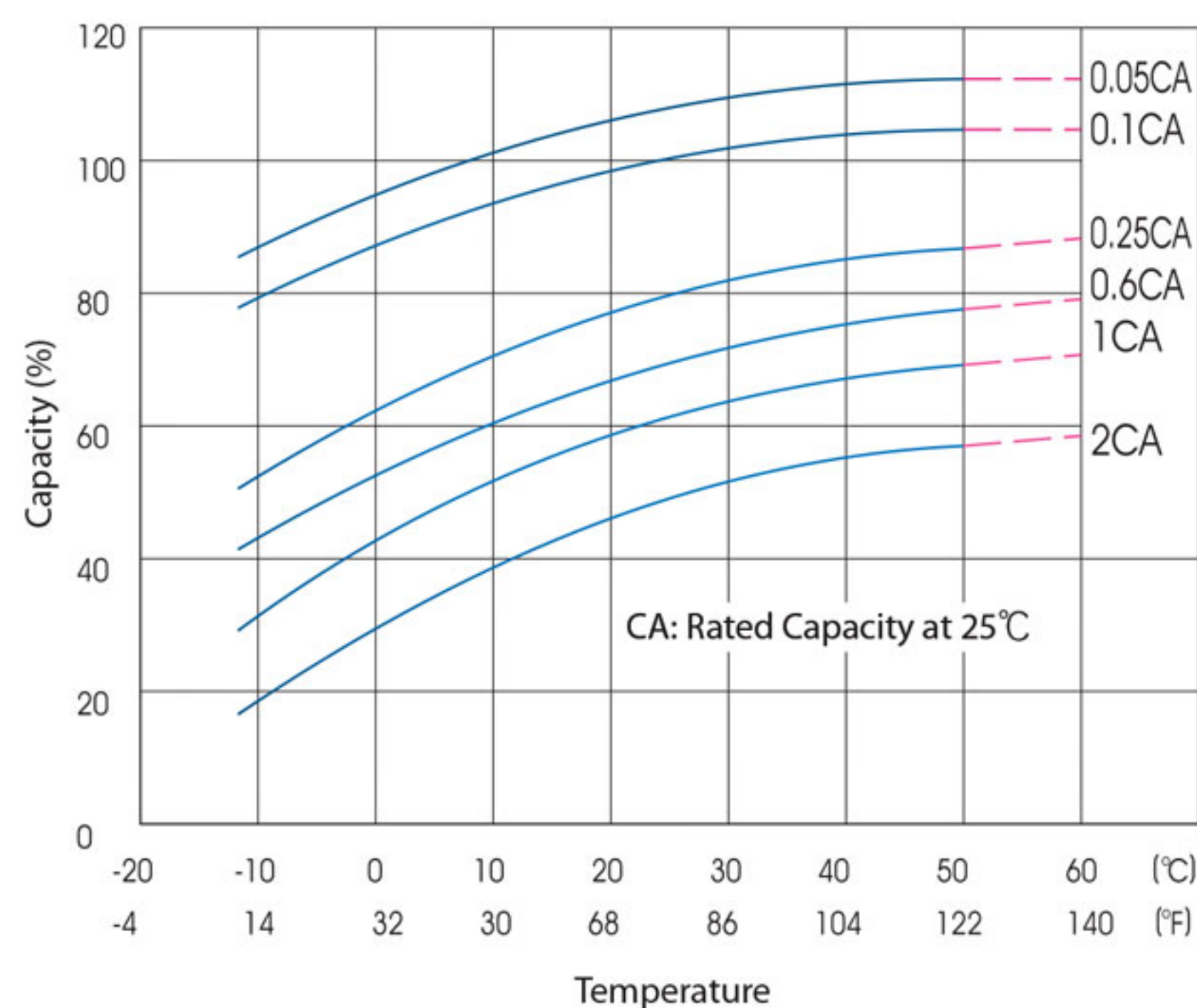
Self-Discharge Characteristics



Relationship of OCV and Residual Capacity % (25°C)



Temperature effects on capacity



Temperature effects float life

